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## Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

### HULL GENERAL INFIRMARY.

#### I. FRACTURE OF OS HUMERI, AND DISLOCATION OF RADIUS AND ULNA AT ELBOW-JOINT: FRACTURE OF INNER MALLEOLUS AND LOWER THIRD OF FIBULA: FRACTURE OF RIBS, AND EMPHYSEMA: RECOVERY.

Under the care of R. M. CRAVEN, Esq.

[*Communicated by* C. J. EVANS, ESQ., *House-Surgeon.*]

SIMON LINWOOD, aged 44, was admitted, under the care of Mr. Craven, on June 14th, 1858, having met with an accident a short time before. He was working at an arch over a drain, when some of the brickwork fell, and buried him beneath it. He sustained a fracture of the right os humeri about its middle, with dislocation of the radius and ulna backwards; fracture of the inner malleolus and lower third of the fibula on the same side of the body, with apparent dislocation of the foot backwards; also fracture of one or more ribs on the right side, with a wound of the lung, and emphysema to a small extent. The dislocation at the elbow was reduced without much difficulty, and the arm was placed upon a straight splint, with an opening at the elbow, where there was a long flesh-wound over the olecranon, but not communicating with the joint. There was a marked prominence in front of the ankle, and a corresponding increase of hollow above the heel, resembling a luxation of the foot backwards, but there was more mobility than usual in such cases. Extension failed to reduce it, and the limb was placed on a double-inclined plane. A broad flannel bandage was bound round the chest.

June 15th. He passed a good night. He was ordered to have an ounce of castor oil, and an effervescing saline draught occasionally.

June 17th. His countenance is anxious, and the respiration hurried. Pulse 120; tongue furred. Large crepitation is heard over the right side of the chest.

℞ Tincturæ benzonii comp. ℥ss; spiritûs ætheris nitrici ℥ij; misturæ camphoræ ad ℥viii. M. Sumat ℥i 4tis horis.

℞ Hydrargyri cum cretâ, pulveris ipecacuanhæ comp. ää gr. iii. Fiat pulvis cum singulis dosibus misturæ sumendus.

June 18th. The chest-signs are the same; the expectoration is muco-purulent, and tinged with blood. Pulse 120.

June 19th, 6 P.M. He seems worse; and says himself he shall not live. Pulse 130; tongue furred, but moist. He has pain in the right side, and great dypsnœa. The expectoration is more bloody. The mixture and pills were continued every two hours.

June 20th. The urgency of the symptoms is somewhat abated. There is less dyspnœa. Pulse 120. The bowels have been relieved several times. Crepitation and friction sound are heard on the right side of the chest. The sputa are still much mixed with blood. The same treatment was continued.

June 22nd. The dyspnœa is much less urgent, and there is now very little expectoration. The pulse is reduced to 100. There is free discharge from the elbow, with a sense of fluctuation. The arm was removed entirely from the splint, and a large quantity of bloody matter was evacuated on pressure. It was laid upon a pillow with the hand raised. He was ordered to have a wineglassful of infusion of calumba three times a day, and meat and half a pint of porter daily.

He continued to improve from the last date; and, on July 20th, his leg was done up in a starched bandage, and he was allowed to get up. The front of the ankle was more prominent than natural, but there was full movement of the joint. The fracture of the arm had firmly united. The wound of the elbow was quite healed.

Aug. 2nd. He was discharged well, having been in the Infirmary seven weeks.

REMARKS. At one time (about 19th June) his condition was exceedingly unpromising, and indeed it was considered that he would not recover. He had an additional shock, too, in the fact of his son being killed on the spot by a similar accident at the same bridge, only a short time after his being brought to the Infirmary.

#### II. DISLOCATION OF THE THIGH-BONE INTO THE SCIATIC NOTCH: FURTHER DISLOCATION INTO THE OBTURATOR FORAMEN DURING ATTEMPTS AT REDUCTION: FINAL REDUCTION BY MANIPULATION.

Under the care of R. M. CRAVEN, Esq.

[*Communicated by* C. J. EVANS, ESQ., *House-Surgeon.*]

JAMES SMITH, aged 38, smith's carpenter, a large powerful man, was admitted, under the care of Mr. Craven, on July 7th, 1859. A large mass of wooden palings had fallen upon him, burying him beneath them. When admitted, he was holding his right leg up against and parallel with his thigh, which was also flexed upon the pelvis. There was found to be dislocation of the right os femoris into the ischiatic notch, the thigh being directed obliquely across the opposite one, with shortening and inversion of the foot. A bone-setter had seen him in the first instance, but dared not meddle with the case. He was put fully under the influence of chloroform, and an attempt at reduction was made by jack-towels from the knee and perineum in the usual manner, but without success. The limb was then quickly and forcibly moved obliquely upwards and across the other, when with an audible noise the head of the bone slipped from its place. But, oddly enough, on further examination, it was found to be not in the acetabulum but in the obturator foramen. The limb was now elongated several inches, and a little everted, and there was a well-marked depression in the ordinary seat of the trochanter major; the body was also arched forward somewhat from the tension on the psoas and iliacus muscles. A similar movement of the limb was again made, and the head of the bone slipped into its socket with an audible noise. A broad bandage was bound round the hips, and the legs were tied together. Forty minims of liquor opii sedativus were given.

July 14th. An ammoniated liniment was ordered to be applied to the hip twice a day. He got up on the 19th, and was discharged on the 23rd; only a little weakness remaining.

REMARKS. There could be no doubt about the second luxation in this case, for the leading symptoms of the two forms of dislocation which existed are so very different. Although the head of the bone was *heard* to slip into its socket, the noise was not the loud *snap* which is generally noticed; this might be accounted for by the great relaxation of the muscles produced by the chloroform.

#### III. SYMPTOMS OF TYPHOID FEVER, WITHOUT THE USUAL POST MORTEM APPEARANCES.

Under the care of Sir HENRY COOPER, M.D.

[*Communicated by* C. J. EVANS, ESQ., *House-Surgeon.*]

JULIA WATKINSON, aged 15, was admitted, under the care of Sir H. Cooper, on December 30th, 1858, with symptoms of fever. She had been ill about a fortnight, her complaint commencing with sickness and rigor. There was a hebetude of manner about her, and the skin had a dingy hue; some little tenderness of the abdomen, but no tympanitis. Scattered over it were a few faint rose spots. The pulse was soft, with moderate volume. She was ordered to have a simple saline draught every three hours.

December 31st. She appears much the same; she passed a tolerable night. She was ordered to take a calomel and antimony pill at bedtime, and an effervescing draught every three hours.

January 2nd, 1859. The bowels have been relieved daily; the stools have an ochreous appearance. The rose spots are more marked and more numerous; the abdomen is rather tympanitic. There is more stupor, with sordes about the mouth. The patient is very weak. Six grains of Dover's powder were ordered to be taken immediately. She was ordered to have two ounces and a half of wine daily.

Jan. 3rd. The patient is more feeble, and sinks down in the bed. The stools continue the same. The Dover's powder was repeated at bedtime, and the wine was increased to four ounces daily.

Jan. 4th. She is decidedly worse; pulse very feeble.

℞ Ammoniæ sesquicarbon. gr. xij; misturæ camph. ℥vj. M. Capiat ℥j 3tiâ quâque horâ.

She died the same night.

Autopsy, fourteen hours after death. The head was not examined. All the other organs of the body were quite healthy. The small and large intestines, which were examined carefully from end to end, presented only a slight patch of congestion in one or two places, not the least appearance of ulceration of the mucous membrane being visible.

Remarks. This patient seems to have sunk simply from asthenia. The healthy condition of the intestines was somewhat remarkable, considering the rose spots and the nature of the stools, which are usually considered as characteristic of intestinal disease.

## BIRMINGHAM GENERAL HOSPITAL.

### LARGE DILATATION OF THE ENTIRE ARCH OF THE AORTA: SEVERE DYSPNŒA: DEATH FROM COMA.

Under the care of James Russell, M.D.

[*Clinical Clerk*—T. H. Bartleet, Esq.]

Peter McHughes, aged 49, a gardener, was admitted on June 8th, 1859. He states that he has always been temperate; he has never had syphilis; he was in the army for seven years, but left it twenty-five years ago. He has always enjoyed good health, excepting that he was laid by for a month by rheumatism some years ago; he thinks that his heart was attacked with the disease, as his chest was blistered. His family is healthy.

One night last October, when in bed, he was attacked, without any premonitory symptoms, with severe pain in the right side of his chest; it was very acute, and caught his breath; after the application of a mustard plaster, it moved into his back and right arm. This pain continued to recur for three or four months, and he suffered from palpitation. In March or April he began to suffer from distress in breathing; but up to a month before his admission he was equal to active exertion. He was in the Leamington Hospital for some time, and left much relieved. He cannot recollect having made any unusual effort before the attack of pain, nor can he refer its occurrence to any special cause.

*Present State*, June 9th. He is a well made man, of healthy aspect, but thin. His chief symptom is a very constricted state of breathing, which occasions great distress, and has been so much aggravated at intervals since his admission, as to necessitate the repeated inhalation of chloroform. It is never entirely absent, and is immediately increased by talking, or by the least excitement, so that the necessary examination of his chest could only be accomplished piecemeal on successive days. There is much stridor during inspiration, and a frequent spasmodic cough, terminating in the expectoration, with much difficulty, of transparent mucus. His voice is somewhat hoarse, and when the spasmodic breathing is present, speaking is performed as much during the protracted inspiration as during the process of expiration. His face is tranquil, and free from lividity. Pulse 86, feeble: alike in each wrist. His appetite is good; but he has eaten little, in fear of "stuffing his pipes".

The inner portion of the three upper right ribs is unnaturally prominent, and the upper part of the sternum is also thrown rather forward. Over this prominent region, a distinct double pulsation is felt; the second impulse giving precisely the sensation of a wave of fluid impinging strongly upon the wall of the chest. There is no abnormal pulsation above the clavicles or sternum. Percussion is perfectly dull in the upper anterior region of the chest, over a space commencing on the left side of the sternum over the origin of the first rib, crossing the sternum obliquely, and involving the three upper ribs on the right side to a distance of three inches and a half. Elsewhere the chest is resonant. The usual cardiac dulness is absent, the impulse of the heart, which is very feeble, being felt by the side of the epigastric triangle. Over the region of dulness a loud double sound is audible, closely resembling the cardiac sounds, excepting in being louder; these sounds diminish in intensity in receding from the tumour, and are very faint at two-thirds of the distance between it and the heart, where they are replaced by the sounds of that organ. There is no bellows-sound.

Both sides of the chest move equally in respiration, but to an unnaturally small extent. The respiratory sounds, as heard at different examinations, presented continual variation; in three examinations they were found to be more feeble over the root of the left lung, but when the breathing was most tranquil they were of equal intensity on both sides; they were sometimes almost absent from certain parts of the chest; they were harsh and generally coarse; rhonchus and stridor prevailed more or less throughout both lungs, or, if absent at first, rapidly developed themselves under the excitement of the examination; occasionally, the respiratory sounds became almost bronchial over the roots of the lungs. A distinct diffused impulse, synchronous with the beat of the heart, was felt over the posterior region of the left chest, especially in the middle third. The venous system was perfectly free from distension; there was no œdema. Deglutition was natural.

During the remainder of his life his health materially improved. The fits of constricted breathing were excited by the least excitement, by the effort of going to the night-chair, or by talking continuously, though only for a short time; there was no lividity during their continuance, but the extremities became chilly, and the pulse fell and intermitted. He was unable to inhale chloroform, on account of the irritation produced by its first impression upon the bronchial mucous membrane, but obtained more relief from opium than from any other remedy, combined with perfect quietness.

On July 18th, he experienced an attack of a totally different character from those which had preceded; his face became perfectly livid; his lips and tongue much swollen; his pupils contracted and insensible; and he was perfectly comatose for half an hour; the attack passed off with heavy sleep. A second occurred on the 20th; about two A.M. on the 22nd, he fell asleep, and at six was found perfectly comatose, with stertorous breathing. He died at eleven A.M.

Sectio Cadaveris. The heart and its appendages were put aside in the temporary absence of Dr. Russell. The heart was large; its outer surface presented traces of old lymph, and the apex adhered to the pericardium. There was a considerable amount of fat upon the right ventricle. The left ventricle was considerably dilated with corresponding hypertrophy. The valves were healthy. The entire arch of the aorta was dilated into a large pouch, five inches in vertical diameter, which commenced immediately above the sigmoid valves, and terminated at about the same level. It reached the level of the upper edge of the first rib, and was in contact with the cartilages, apparently, of the three upper ribs; it lay in front of the trachea, but was in very close contact with that tube only just above the bifurcation, and had not exerted material pressure upon it; the interior of the trachea presented its normal character. Both brachio-cephalic veins and the superior cava were so closely adherent to the sac, that it was difficult to conceive that they could escape material interference with their function; the vagi and the left recurrent nerves were in close connection with its walls. The cartilages of the ribs were uninjured. The sac was empty; its interior was puckered and irregular; a few flakes of fibrine adhered to it; but it was free from calcareous degeneration. The superior wall was half an inch in thickness; in one patch the outer layer was removed, and the surface of the subjacent tissue was friable and irregular, exactly resembling the surface of an old coagulum, for which indeed it was at first mistaken; the inner and outer layers were separated with great facility for a considerable distance. The inner and outer layers of the middle coat of the primary arteries presented the same readiness to admit of separation. A large coagulum coloured with blood lay in the aortic orifice, and in great measure closed it; it was four inches in length; its larger extremity, nearly three inches broad, lay within the pouch. A second coagulum of pure fibrine lay doubled up in the tricuspid orifice; it was three inches long, and very narrow; it was perfectly free, except at

one extremity, where it was entwined among the tendinous cords of the valve.

Remarks. The constricted breathing, so prominent and distressing a symptom in this case, was doubtless occasioned by irritation of the vagi, which were in very close connection with the wall of the aneurismal sac; but it was remarkable how far the spasmodic action extended along the bronchial tubes, apparently throughout their ramifications. The stridor was indeed more bronchial than laryngeal, and the condition of the lungs appeared to resemble that which is present in spasmodic asthma. The left vagus, from its relation to the arch of the aorta, would suffer more than the right, under varying conditions of the sac, and it is probably to this circumstance that we must ascribe the greater feebleness of the respiratory sound in the root of the left lung, which was repeatedly noticed when the breathing was constricted, but was absent when respiration was tranquil. It is likely that the comatose attacks which terminated the case were occasioned by the presence of the coagula in the orifices of the heart, chiefly perhaps by that in the tricuspid orifice, which was evidently of older date, and would exert a more direct influence in retarding the return of blood from the brain. The case presented a very good example of the double pulsation and double sound in thoracic aneurisms, the latter nearly resembling the sounds of the heart; and there could be little question that the second sound and impulse were produced by a regurgitant wave transmitted through the aneurismal sac, which, being quite empty of coagula, was in the most favourable state for the production of such a wave.

## ST. BARTHOLOMEW'S HOSPITAL.

### TWO CASES OF EXTRAVASATION OF URINE.

Under the care of W. Lawrence, Esq.

[*From Notes by* G. F. Helme, Esq., *House-Surgeon.*]

Case I. William Woodcock, aged 39, was admitted, under the care of Mr. Lawrence, on February 3rd, suffering from stricture of the urethra, with an inflammatory swelling in the ischio-rectal fossa. He had been the subject of stricture for nine or ten years, and had frequently had instruments introduced into his bladder on account of complete retention. A week previous to admission, he noticed a swelling on the buttock. After remaining in the hospital three weeks, Mr. Lawrence, suspecting deep suppuration in the ischio-rectal fossa, made an incision into the tumour which presented itself there. No matter escaped; the cut tissues only seeming infiltrated and brawny. The wound caused by the incision remained open, in consequence of a considerable quantity of urine escaping by it, scarcely any being passed by the penis.

Several attempts were now made to pass a full-sized catheter; but, in consequence of the riddled state of the patient's urethra, it was impossible to introduce any instrument at all. The patient continued in this state, passing all his urine by the wound in the ischio-rectal fossa, up to the 12th March; when, as he was desirous that something further should be done, he was removed to the theatre, Mr. Coote intending to perform perineal section on a Syme's staff. However, under the influence of chloroform, Mr. Coote succeeded in passing a No. 9 catheter, and consequently the idea of performing perineal section was abandoned.

The catheter was retained in the bladder until March 21st, up to which time the patient had not had a single untoward symptom; and, when the instrument was removed, the fistula in the perineum was found to have closed, the urine passed by the penis, and the patient expressed himself as being "quite a different man, not having been so well for years."

March 23rd. A No. 9 catheter was passed with ease, and retained for twenty-four hours, when it was withdrawn, in consequence of a good deal of constitutional disturbance (rigors, etc.) coming on. The rigors continued, at different intervals, up to the 28th; up to which time the urine had been passed freely by the penis.

On the morning of March 28th, Mr. Helme was called to the patient, and found his penis and scrotum considerably swollen and œdematous, evidently from the presence of extravasated urine. The patient had, only a few minutes before his arrival, got out of bed to pass urine; and, having felt something snap, the swelling appeared. He was in a critical state; small pulse; tongue dry, and sordes on the teeth. Very free incisions were made in the penis and scrotum.

Mr. Coote soon saw him, and he determined on cutting into the bladder, and giving free exit to the urine. Chloroform having been administered, a No. 9 catheter was introduced and withdrawn: an ordinary lithotomy staff was then passed, and Mr. Coote, with the aid of a blunt gorget, made a free opening into the bladder; in fact, performed the lateral operation for lithotomy, being convinced that nothing short of this formidable proceeding gave any chance of the man's recovery. He never rallied from the operation, and died on the morning of April 1st.

On *post mortem* examination, a large abscess, containing about six ounces of pus was found connected with the anterior wall of the bladder, but not communicating either with the interior of the bladder or the cavity of the pelvis. The whole of the membranous portion of the urethra was found to have sloughed away. The kidneys were extensively diseased, in consequence of the old-standing stricture.

Case II. James Pettit, aged 40, was admitted March 5th, complaining of a painful swelling in the perineum. The day previously to his admission, he had applied at the surgery as a casualty patient. The perineum was then slightly indurated; and, the hospital being very full, he was sent home, and told to come in a few days, or sooner if he was at all worse. However, on the following day he was admitted, having passed a restless night in consequence of the severe pain. The perineum, at the time of his admission, was considerably tense and swollen, with a slight blush over the scrotum. He had never had gonorrhœa; but the corona glandis was marked with the cicatrix of a phagedenic ulcer. He passed water well, and without any pain. It was thought advisable to pass a catheter, which was done without any difficulty, there being apparently no obstruction to its passage.

March 7th. Mr. Lawrence saw the patient. The swelling of the scrotum was extended, and all signs of extravasation of urine. Very free incisions were made into the perineum and scrotum: the tissues had sloughed, and the incisions exposed a cavern almost the size of an orange. The urine now passed by the wound; some also by the penis. Brandy was ordered *ad libitum*.

March 8th. He took twenty-four ounces of brandy in twenty-four hours, and appeared none the better for it. The urine was still extending, as there was a slight blush and tenderness on the pubes.

March 9th. Urine was evident on the pubes: incisions were made. Brandy was ordered *ad libitum*.

March 10th. It was evident that the patient had no chance of recovery. The urine was extending further.

March 11th. The redness from extravasated urine had now reached the axillæ on both sides: incisions were made. The patient was evidently sinking.

March 14th. The patient died this morning, having lived much longer than could have been expected: the quantity of brandy taken evidently kept him alive.

On *post mortem* examination, the urethra was found *entirely free from any stricture*. The bladder and kidneys were also quite healthy. About a quarter of an inch of the urethra (about the membranous portion) had from some cause ulcerated, and was the means of letting the urine escape.

## ST. GEORGE'S HOSPITAL.

### TWO CASES OF EXTRAVASATION OF URINE.

Under the care of Cæsar Hawkins, Esq., and Prescott Hewett, Esq.

Case I. John L., aged 42, was admitted on May 12th. He was a butler, and had been intemperate at one period of his life, but not latterly. He had had a stricture, the result of gonorrhœa, for nine or ten years; and had always been able to pass a No. 4 catheter when he found any difficulty in making water. On May 7th, he was attacked with retention of urine, and failed in passing his catheter. He then went to his ordinary medical attendant, who also found himself unable to pass the instrument. A little urine passed at that time, but none during the next day. On the following morning, another attempt at catheterisation was made, but again without success. Some medicine was given, and the urine continued to flow by drops till the morning of the 11th, since which time he had passed none. A fresh attempt was made to pass instru-

ments just before his admission. This was at midnight; and when the house-surgeon saw him, he determined not to attempt to pass instruments, but ordered a hot bath, and forty drops of laudanum every hour. He went to sleep after the second dose, so that no more laudanum was given. When he was next seen, at 10 A.M., the bladder was found to be distended beyond the umbilicus, and excessively hard and tender to the touch. The whole cellular tissue of the perinæum, scrotum, and penis, were distended and reddened from extravasation of urine. The pulse was small, 108; the tongue brown and perfectly dry. The pupils were still contracted and sluggish from the opium, and he was constantly dozing off to sleep. When an instrument was passed down the urethra, the anterior part of its membranous portion was found much lacerated; and it was impossible to reach the bladder. He was accordingly taken into the operating theatre, and Mr. Prescott Hewett proceeded to cut into the bladder. A staff was at first passed down the urethra as far as it would go; but it was found that its point passed out of the middle line, and that it was of no service. Keeping in mind, however, the relations of the parts, Mr. Hewett had no difficulty in making an incision into the dilated portion of the urethra behind the stricture, which was easily recognised by its smooth lining and tubular outline; and then the finger could easily be passed into the bladder. A gum catheter was then guided along the finger, and a very large quantity of offensive urine drawn off. Free incisions were made into the parts where extravasation had occurred. The subsequent treatment consisted merely of an attempt to keep him alive by the very free use of stimulants and nourishment. This, however, did not succeed: he gradually became weaker and less sensible; then delirium came on, followed by hiccough; and he died on the fifth day from the operation.

On examination, the urethra was found healthy down to within an inch from the membranous portion, where it was extremely dilated and sloughy, forming a large cavity with ragged walls, which led to the bladder. The incision in the perinæum led into this cavity, in front of the prostate. There was no obstacle on the dead subject to the passage of an instrument, the tissue forming the stricture having been entirely destroyed by the sloughing. The bladder was a good deal thickened and fasciculated, and the mucous membrane ulcerated in patches. The kidneys were healthy, except that there were spots of ecchymosis here and there in their tissue. The ureters were not dilated. The other viscera presented nothing remarkable.

Case II. T. B., aged 39, was admitted, under Mr. Hawkins's care, on May 18th. He had had a bad stricture for the last six years; and much of the glans penis had sloughed off, as a consequence of syphilitic sores. The urine passed through a new orifice, about an inch below the meatus. He had been under treatment once for the stricture some years ago, when a No. 4 silver catheter was passed several times into the bladder. Four years ago, he had had retention of urine, which was relieved at this Hospital by the passage of a catheter. At that time the stricture seems to have been tight, as the instrument could not be passed until after the use of the hot bath. Having obtained relief from the retention, he would not stay in the house. Since this he had had occasional attacks of retention, but had always been able to pass water after a few hours, and never had had any treatment. A month ago, in one of his attacks of retention, he tried to pass the smallest gum catheter for himself, but failed to do so. The present attack had lasted till the previous morning (he was admitted at 5.30 A.M.) The cellular tissue of the penis and scrotum was then much distended with extravasated urine; and the extravasation was beginning to show itself above the groin, on the lower part of the abdomen. There was no hardness or pain in the perinæum; and the patient described the swelling as having commenced in the penis, and passed downwards to the scrotum, and upwards to the abdomen. Free incisions were made into the cellular tissue whenever any trace of extravasation was seen. The bladder did not appear to be distended. The prepuce was so much inflamed as to cause phimosis; and when it was slit up, it was almost impossible to find the urethra in the midst of the mass of cicatrix by which the glans was replaced. Mr. Hawkins succeeded, however, at length, in passing a small silver catheter down through a dense mass of stricture to within a short distance of the membranous urethra, where the instrument seemed to be checked by another stricture. He had two hot baths during the day, and several doses of laudanum; but the urine passed only in drops. The same treatment was continued next day, until the increased drowsiness compelled the omission of the laudanum. The whole skin and cellular tissue of the scrotum were now nearly black from gangrene. Mr. Pollock was summoned, in Mr. Hawkins's absence, and made numerous fresh incisions, one of which was prolonged through the middle line of the whole scrotum into the urethra. Through this incision the urine passed freely during the rest of his life; but he did not rally, notwithstanding the very free use of stimulants. The gangrene extended; he became quite insensible towards the close of his life, and sank on May 23rd, four days after the last operation.

On *post mortem* examination, the whole of the superficial parts of the scrotum and penis were gangrenous, and the gangrene had spread to a slight extent on the abdomen, near the root of the penis. Numerous incisions existed into this gangrenous mass. The urethra was much dilated, from the posterior part of its spongy portion to the meatus, forming a sloughy cavity with ragged walls. In front, it ended in the sloughy tissue of the glans penis, the natural meatus being quite destroyed. Posteriorly, there was a slight contraction, about an inch, just in front of the membranous portion; and just in front of this, a false passage in the floor of the urethra, leading a short distance into the corpus spongiosum. The anterior part of the urethra presented no traces of the stricture which had existed during life, all the tissue which had formed the constriction having sloughed away. The bladder was much distended; its muscular fibres fasciculated; the mucous membrane ulcerated in detached spots, and in some places black from ecchymosis. The kidneys were somewhat vascular, but otherwise healthy. The ureters were natural. The other viscera were healthy.

Remarks. We have given above a series of cases of a complaint unfortunately only too common, but which in most instances might have been entirely obviated by a little timely attention. Unhappily, the mere presence of a stricture gives so little inconvenience, that poor men will commonly prefer bearing it and hoping that it will cure itself, to a troublesome or costly attendance on a medical man. Hence these cases are seen almost exclusively in hospital practice. In all the cases before us, except the second, the patients were not seen till after the occurrence of extravasation, so that there could be no doubt of the propriety of the course adopted, viz., to open freely the urinous collection and seek the nearest way from the situation of the latter into the urethra behind the stricture—otherwise, we believe, there is now little difference of opinion as to the preferability of the method of treatment recommended by Mr. Cock, viz., to open the bladder from the rectum, and allow the urethra a few days of quiet to right itself, instead of irritating and perhaps wounding it by hopeless attempts to pass instruments. In the last case, the deformed and neglected condition of the urethra forbade the least hope of reaching the bladder from the meatus, still it was better to make the attempt, since the scrotum must be opened, and therefore the puncture of the bladder from the rectum would not have been justifiable. In Mr. Coote's case, and in the operation performed by Mr. Hewett, the only prospect of a cure was obviously in procuring a free exit for the urine by cutting into the bladder from the perinæum; and since in the former, the dilatation of the stricture had not prevented (if it had not occasioned) the extravasion, it was thought useless to allow more urine to be extravasated, which would doubtless have occurred had incisions merely been made. In Mr. Hewett's case no staff could be used, or rather the staff, instead of a guide, was a means of error, since it led away from the middle line, and yet no difficulty was found in reaching the neck of the bladder. This operation is, indeed, easy enough on the dead subject, as we have satisfied ourselves by repeated trials. On the living, the sloughing and indurated state of the tissues doubtless makes the matter much more complicated; still, by keeping steadily in the middle line, the dilated urethra must at length be reached, and if the water is retained, its escape will prove a guide for the introduction of the catheter, otherwise the smooth walls of the cavity will be recognised by the finger. Mr. Lawrence's second case was a very uncommon one, being apparently one in which the urethra was affected secondarily by an abscess forming, from some accidental cause, in the perinæum. The large size of the cavity, and the frightful rapidity with which the effusion proceeded, precluded all hope of the patient's recovery. The frequent inefficiency of the opium treatment for the relief of retention of urine, is shown by the fact that in two cases the patients fell asleep and became partially narcotised, without any alleviation of their symptoms.

# Original Communications.

## THE CONSEQUENCES OF ASTHMA.

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Tendency of Asthma to disorganise. The Consequences of Asthma fourfold: 1. Its direct results on the Bronchial Tubes; Hypertrophy of the Bronchial Muscle; Bronchial Contraction. 2. Results of Obstructed Pulmonary Circulation; *a*, In the Lungs (Congestion, Œdema, etc.); *b*, In the Heart (Hypertrophy, Dilatation); *c*, in the Systemic Venous System (Venous Stasis, Œdema, etc.). 3. Emphysema; Is pure Asthma capable of generating it? 4. Acquisition of the Asthmatic Physique; Its Distinctiveness; Its Characteristic Gait, Physiognomy, and Configuration; Rationale of the Asthmatic Spinal Curvature; Peculiar Chest of Young Asthmatics.

Asthma never kills; at least, I have never seen a case in which a paroxysm proved fatal. If death did take place from asthma, it would be by slow asphyxia—by the circulation of imperfectly decarbonised blood; and before this occurred I think the spasm would yield. When asthma terminates fatally it does so by the production of certain organic changes in the heart and lungs; and it is on this tendency to the generation of organic disease that the gravity of asthma depends.

The consequences of asthma admirably illustrate two laws of our organisation: one, that the workings and processes of life are so intimately bound together, so exactly fit and interlock, that one cannot go wrong without dragging the rest with it; the other, that healthy function is as necessary to healthy structure, as healthy structure is to healthy function. Without asserting that the perverted function of a tissue or organ is in all cases dependent upon some real though perhaps inappreciable perversion of its structure or constitution (which, though perhaps probable, is at present beyond our demonstration), we may safely affirm the converse—that no tissue or organ can long be the seat of perverted action, without perversion in its structure or constitution inevitably following. Organs are made for action, not existence; they are made to *work*, not to *be*; and only when they *work* well can they *be* well. It is the universal law of organisation, that the function of parts shall be, if not absolutely coincident, at any rate indissolubly connected, with their nutrition. The very nutrition of organs is planned on the supposition of their being working machines, and in exact accordance with the work they have to do; so that their working can neither be suspended nor deranged without interfering with their nutrition, and therefore with their structure. Organs either misused or disused invariably organically degenerate.

If we examine the chest of an asthmatic who has but recently been affected with his disease, or whose attacks have been infrequent, we shall very likely find evidence of perfect anatomical soundness of all its organs; but if we examine him again in ten years we shall to a certainty, if the patient has in the interval suffered constantly from attacks of his malady, find evidence of organic disease of the lungs, and very likely of the heart. Now, why is this? Why should organic disease be the inevitable sequel of that which is at first a mere functional and occasional derangement? From the very law I enunciated just now—that functional disorder cannot exist without dragging in its train organic change.

The consequences of asthma appear to me to be fourfold:—1. The direct results on the bronchial tubes themselves of the inordinate action of their walls; 2. All those results of obstructed circulation, first pulmonary, then systemic, which the inadequate supply of air to the lungs induces; 3. That special result of the unequal and partial distribution of air to the lungs—emphysema; 4. The general effect of the disease on the physiognomy and build of the patient—the production of what may be called the *asthmatic physique*.

1. *Direct Results of the Asthmatic Spasm on the Bronchial Tubes themselves.* Organic muscle obeys the same laws as voluntary; its nutrition, and therefore its development, is proportioned to its activity; and this evidently from the same final cause—that it may be equal to its work. No sooner is its activity exalted, or more work thrown upon it, than it immediately hypertrophies: witness the urinary bladder in stricture, and the gall-bladder in biliary calculus. The bronchial tubes in asthma afford but another example of the same thing, and their excessive action issues, from the operation of the same law, in a similar hypertrophous development. Accordingly, we constantly find, amongst the morbid appearances mentioned in the *post mortem* examinations of asthmatics, an undue conspicuousness and thickening of the circular fibres of the bronchiæ. One certain result of this hypertrophy of the bronchial muscles is a permanent thickening of their walls, and consequent narrowing of their calibre; and one possible result is a greater disposition on the part of the hypertrophied muscle to take on a state of contraction. To the former, perhaps, is in part due that slight constant dyspnœa which is so disposed to develope itself in asthma; to the latter, the increased tendency to, and frequency of, spasm which characterises some cases.

Contraction of the bronchial tubes—a permanent diminution of their calibre—is another direct result of asthma. A certain amount of narrowing is inevitably involved in the increased thickness of their walls, due in part to the hypertrophy of their muscular element, in part to the congestive tumidity of the mucous membrane, which is the almost invariable accompaniment of long continued asthma. Perhaps, too, as suggested by Dr. Williams, the very fact of an increase of the contractile element of the walls of the bronchiæ involves a degree of permanent passive contraction in excess of what is natural, just as the irritable bladder, is a contracted bladder as well as a thickened one. A certain amount, then, of thickening, and a certain amount of contraction of the bronchial tubes, is fairly to be assigned to asthma, and has in it its sole and sufficient cause.

But we sometimes find in cases of asthma a degree of contraction far beyond what is thus explicable, amounting to complete occlusion. Now remembering how commonly asthma is complicated with bronchitis, how exactly such a condition is that which old severe bronchitis tends to produce, and how inadequate simple spasm seems to produce it, I am inclined to think that the asthma has nothing to do with it, that it is to be assigned wholly to the bronchitis that has complicated the case, and that cases of asthma in which it is found are always mixed cases. This kind of bronchial contraction, converting the tube into a fibrous impervious cord or band, thickened and knotty, I believe to be always inflammatory in its origin.

Dilatation of the bronchial tubes is another morbid condition that has been found in asthma. I think the most dilated bronchial tubes I have ever known were in a case of asthma. But whenever I have seen it there has been bronchitis as well as asthma, and, for the reason I have just assigned in the case of contraction, I should attribute this also to the bronchitis and not to the asthma. I do not see how bronchial spasm could possibly generate it, whereas I do see in the destruction of the vital and physical properties of the bronchial walls by severe inflammation the most rational explanation of its production.

And I may here remark in passing, that there are two circumstances that greatly impair the value and reliability of the specimens of the morbid anatomy of asthma found in our museums:—one is, the looseness with which the word asthma is, and still more has been, used; the other, the extreme frequency with which, even in cases of true asthma, bronchitis has at some time or other existed.

2. *The Results of Obstructed Circulation induced by Asthma.* Asthma is a state of partial asphyxia, and it therefore gives rise to an identical morbid anatomy, differing only from that of absolute asphyxia in its incompleteness, and in those ulterior changes for which, in absolute asphyxia suddenly induced, there is no time. When a man is drowned we know that an impassable obstruction is at once established to the passage of the blood through the capillaries of his lungs; within a minute or two the stoppage is complete. The pulmonary vessels, still filled from behind, become engorged with the blood that they cannot pass on; the right chambers of the heart become distended with the blood which they cannot empty into the engorged lungs; and thus, the obstructing force propagated backwards, the cavæ and their tributaries become distended with accumulated blood in increasing quantities as long as life is prolonged. Meantime, the left side of the heart receives hardly any blood, and its action fails for want of its normal stimulus, while the

right side becomes less and less able to contract on its bulky contents.

Soon, from these opposite causes, the heart ceases to beat, and life is extinct. We open the body, and find—arteries, left side of the heart, and pulmonary veins empty; pulmonary artery, right side of the heart, and all the great veins gorged with black blood. Now there can be no doubt that exactly the same thing takes place at every attack of asthma, but only to a degree that is compatible with life. If we could see into an asthmatic during a fit we should see a certain dose of the same deranged distribution of blood, and from the same cause—pulmonary capillary arrest from the shutting off of air. We should see pulmonary venous congestion, distended right heart, large veins full, and a scanty supply of arterialised blood finding its way to the left ventricle. All external manifestations are consistent with this:—the small and feeble pulse, the irregular and faltering systole, the turgid veins of the head and neck, the occasional hæmoptysis, the dusky skin. If all the bronchial tubes could be simultaneously so contracted as to be completely occluded the same result would take place as if a ligature were placed round the wind-pipe, the deprivation of air would be complete, and death would supervene. But such is not the case, all the bronchiæ are not simultaneously contracted, and their contraction does not amount to complete occlusion. The arterialisation of the blood is lowered, not arrested, and life is maintained. By and by the spasm yields, air is freely admitted, the bar at the capillaries ceases, the pulmonary veins unburden themselves, and all is well again.

But can such a state of things exist long, or exist often, without producing other organic changes? Certainly not. No tissue or organ can be long or often the seat of vascular disturbance without becoming more or less disorganised. I shall consider the changes that result from this stoppage at the pulmonary capillaries that every attack of asthma gives rise to in the order in which they occur,—in the lungs, in the heart, and in the systemic venous system; that is, in those three segments of the circulation along which, in a retrograde direction, the obstructing force is propagated.

*In the Lungs* the first result is what is called venous congestion—a term in part correct and in part erroneous; for, while the congestion is congestion with venous blood, the congested vessels are really branches of the pulmonary arteries. I am not aware that the exact seat of this congestion is determined, whether it is limited to the branches of the pulmonary arteries, or involves the capillaries as well. That will depend on where the seat of obstruction is. If the capillaries are congested the seat of obstruction must be in front of them; if the capillaries themselves are the seat of the obstruction they cannot be congested—the congestion must be limited behind them. Now I am inclined to think that the exact seat of the obstruction is in the minute venules, just where the blood is passing from the capillaries into the pulmonary veins; and my reasons are these:—The cause of the stoppage is the blood not being what it should, not being properly decarbonised: now, the capillaries are the seat of its decarbonisation; it is not, therefore, until it leaves them and arrives at the ultimate pulmonary venous radicles that it becomes what it should not be—venous blood where it ought to be arterial. That point, then, where its defective arterialisation must be first recognised, must be the point of its arrest. This would imply capillary engorgement. Whether the absolute capillaries are involved in the engorgement I cannot say, or whether it stops at the ultimate twigs of the pulmonary artery. It should be made the subject of careful microscopical observation, which I have not yet made it.

Indeed, I am not aware that the state of the vessels in chronic pulmonary congestion has ever been made the subject of microscopical investigation.

One result of this impeded circulation through the lungs which I believe will one day be demonstrated, is thickening of the walls of the ultimate arterial twigs analogous to that which Dr. Johnson has shown to take place in impeded circulation through the kidney, and produced in an identical way. This too, I regret to say, I have never since the idea occurred to me had an opportunity of verifying. Another result is, that the engorged vessels gradually lose their tone and yield to the distending force of the blood, so that the congestion becomes more and more considerable and of more and more easy induction. Another result is, that the serous portion of the accumulated blood transudes the walls of the vessels, and, escaping into the areolar tissue and air cells, gives rise to œdema. From this accumulation of blood, and displacement of the air in the air cells by serum, parts of the lung may undergo what has been called splenization, becoming quite solid, airless, sinking in water, non-crepitous, and black. And this is the state in which the more dependent parts of the lungs of those who have died of chronic asthma are often found;—a state not to be distinguished from that of the lungs in fatal chronic bronchitis, and which is, in fact, the morbid anatomy of slow asphyxia, however produced.

*Hypertrophy, and dilatation of the right side of the heart* has long been a well known and recognised complication of asthma. In examining the chest of an asthmatic patient we often find the heart's pulsation plainly felt, and even seen, in the scrobiculus cordis, while in its normal situation it can hardly be perceived. For this there are several reasons. One is, that the violently acting diaphragm draws the heart down lower than usual; another, that an emphysematous left lung may thrust it downwards and to the right, and also, by overlapping it, produce that undue resonance in the region of the heart's dulness and that indistinctness of the apex-beat beneath the nipple which are recognised signs of emphysema in this situation. But a third reason undoubtedly is dilatation of the right ventricle.

Although this last is the only cause I have seen assigned for this displacement of the heart's beat, I insist on the other two as adjuvant, because they are evidently sufficient of themselves to drive the heart down into the scrobiculus, and transfer its pulsation thither without any dilatation of the ventricle. In cases of recent asthma, where there has been no time for dilatation or hypertrophy of the right ventricle to take place, and where, in the intervals of the attacks, the situation of the heart's beat has been perfectly normal, I have felt and even seen this pulsation in the scrobiculus very strongly marked at each fit, coming with the fit and going with the fit. Now hypertrophy and dilatation of the right ventricle are not conditions that can come and go. It is evident, then, that a transference of the heart's pulsations to the scrobiculus may be produced by simple displacement of the organ, without any extension of its right chambers; and therefore, when occurring during a paroxysm of asthma, this sign is not to be relied upon as evidence that the heart has organically suffered.*

But why should heart-disease be the legitimate sequel of asthma? Why should the stricture of the bronchial tubes tend to produce hypertrophy and dilatation of the right ventricle? The connection of these remote and apparently dissociated conditions is at once supplied by the law of asphyxia which I have just now referred to—that the shutting off of air from the lungs immediately brings the pulmonary circulation to a stand-still, and places in front of the right chambers of the heart an obstacle which they cannot overcome. This obstacle at the pulmonary capillaries provokes unwonted efforts on the part of the right ventricle, which of course becomes more or less hypertrophied. After a time the ventricle yields to the distending force of the accumulated blood, next, the auricle, and finally, the great veins and the whole of the venous system; so that ultimately asthma may end in general venous congestion and dropsy, just in the same way as primary cardiac disease. But asthma may go on for a long time without any such results. It is surprising how severe the paroxysms may be, and for how many years the disease may continue (provided the fits are not prolonged and frequent), without the heart being in the least affected. It is only in cases of very long standing, and when the fits are tedious, and leave a certain amount of permanent dyspnœa in the intervals (especially if there is some bronchitic complication), that these changes in the heart take place. As far as my experience goes, I should say that they never occurred as long as the recovery in the intervals was absolute. I cannot therefore agree with Dr. Todd (*Medical Gazette*, vol. 46, p. 1001) in the importance he assigns to evidence of dilatation of the right ventricle as a diagnostic sign of asthma. "I look upon this sign," he says, "as one of the most characteristic symptoms of asthma; and I consider its presence in any case where I suspect asthma as a clear confirmation of the correctness of those suspicions. In accordance with this view, one of my first steps in examining a patient whom I suspect to be asthmatic is to apply my finger to the scrobiculus cordis. If I find no beating of the heart there, my conclusion is a contingent negative. But if I find it beating there, and not in its natural

* Of the truth of this, any one may satisfy himself by placing his finger on his scrobulus cordis, and taking a deep inspiration, when he will immediately feel the cardiac pulsations, which will continue as long as he keeps his chest at full distension;—he expires, and it is gone. Here you have the same conditions with regard to the situation of the heart that you have in asthma, only in a less degree—lung distension and flattening of the diaphragm; in fact, in asthma the parietes of the chest, diaphragmatic and costal, are in a state of permanent extreme inspiration.

position under the nipple, my conclusion is a certain affirmative."

Doubtless, in a case of suspected asthma, evidence of dilatation of the right side of the heart would strengthen the diagnosis; but the absence of it would go no way at all to negate the supposition that asthma existed. It would simply show that one of the results of asthma had not yet arisen, and it would establish a presumption that the disease had not been of long standing, that it was unassociated with chronic bronchitis, and that it had as yet inflicted no organic changes on the lungs. A patient's heart-beat may be in every way normal, and yet half an hour ago he may have been in the agonies of an asthmatic paroxysm. The positive evidence of heart-change in asthma is of some value; its negative evidence is worthless.

3. *Emphysema* is certainly the commonest of all the morbid changes that asthma tends to produce. I should say it was extremely rare to find the lungs of those who have suffered from asthma long entirely free from emphysematous inflation. The best examples of emphysema that I have ever seen have been in the *post mortem* examinations of chronic asthma.

Adopting that view of emphysema so ably advocated by Dr. Gairdner—that it is essentially a compensatory dilatation, and implies the neighbourhood of non-expansible lung—I believe the mechanism of the production of emphysema by asthma to be as follows:—The bronchial spasm shuts off the air; the shutting off the air produces capillary stasis—partial asphyxia; the congested vessels relieve themselves by the characteristic mucous exudation; the continued occlusion of the bronchial tubes, if the spasm does not yield, shuts up this mucus, and prevents its escape, and at the same time, by barring the access of air, prevents efficient cough; so long as the spasm lasts, therefore, its escape is doubly prevented—by direct obstruction, and by the want of the natural machinery for its expulsion. The tubes affected by the asthmatic contraction thus become doubly obstructed—at first narrowed by spasm, and then completely occluded by mucous infarction. As long as the spasm lasts the escape of the mucus is impossible. In the meantime, whatever may have been the length of the attack (and we know that it often lasts for days), the inspiratory muscles are making the most violent efforts to fill the chest, and are, in fact, keeping it in a state of extreme distension.

The length of time required for the removal of air from a lobule, from which communication with the external atmosphere is completely shut off by occlusion of its corresponding bronchial tube, I do not know; so I do not know if, in an attack of asthma, any actual lobular collapse could take place, although, in a prolonged attack of some days I feel no doubt that it would. At any rate, the lobules whose bronchiæ are occluded cannot yield to the distending force of the inspiratory muscles; the whole distension of inspiration is, therefore, spent on those portions of the lungs whose communication with the external air is free; the open lobules have to expand for themselves and their occluded neighbours, and undergo an excessive inflation in proportion to the amount of lung that is non-expansible,—in other words, become emphysematous. If we consider how complete the occlusion must be by this double process of spasm and infarction, how protracted asthma often is, and how violent are the inspiratory efforts that characterise it, I do not think we shall wonder at any amount of emphysema that is thereby produced, nor at its being one of the commonest organic changes to which asthma gives rise.

It will be seen, from the account I have just given, that asthma produces emphysema just in the same way that bronchitis does. The two processes are essentially identical. In the one case the bronchial tubes are narrowed by inflammatory thickening of their walls and occluded by inflammatory exudation (muco-pus); in the other, they are narrowed by spasmodic contraction and occluded by the exudation of congestion (viscid mucus). The only difference is, that the narrowing and occlusion of bronchitis are generally of longer duration than those of asthma.

I think Dr. Walshe is quite right in his opinion that "The connection of emphysema with spasmodic seizures is certainly sometimes, possibly always, dependent on an intervening irritative or passive congestion of the tubes." That it is so sometimes I think is certain, because I think that congestion of the tubes is the immediate result of prolonged spasm. But is it always? If not, then emphysema may result from the spastic occlusion of the tubes without any mucous infarction. Is this possible? Is asthmatic spasm ever so complete and continuous as to produce the results of plugging,—lobular isolation, and collapse? This is a question that I think would be very difficult, at present perhaps impossible, to answer. One thing I feel strongly persuaded of, that it is not necessary that there should be any bronchitic complication, anything actually inflammatory, in order that asthma should result in emphysema. I have seen emphysema developed in a case of asthma in which bronchitis never existed.

It is hardly worth while for me to describe the symptoms that mark the closing scene of those miserable cases of asthma that terminate in the production of these organic changes in the heart and lungs that I have just been describing. When once the right cavities of the heart have become dilated and the obstructing force retrogrades upon the systemic veins, the symptoms are not to be distinguished from those which characterise a similar condition induced by chronic bronchitis. The cases differ alone in their previous history. There is the same rattling wheeze, the same choking cough, the same orthopnœa, the same abundant frothy expectoration (but in the case of bronchitis more purulent), the same venous regurgitation, the same choked-up breathlessness, getting ever worse and worse as the œdema and congestive solidification rise higher and higher in the lungs, the same general œdema beginning at the feet and gradually creeping up the trunk, the same cyanosis. The sufferings of this gradual choking-out of life are most painful to witness till the increasing heaviness from the circulation of venous blood in the brain deepens into the insensibility which ushers in dissolution.

## OBSERVATIONS ON SOME OF THE OBSCURE FORMS AND VARIETIES OF AGUE: WITH GENERAL REMARKS ON THE DISEASE.

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[*Read before the East Kent and Canterbury Medical Society.*]

The phenomena of ague, so characteristic, so well known, and so often witnessed in this division of the county, might well be supposed to afford no difficulties in diagnosis; and when developed in its three consecutive stages of cold, fever, sweat, followed by immediate recovery, there can be none; but the variations which these phenomena assume, their sometimes absence, and their not unfrequent substitution by other symptoms, apparently totally unconnected with ague, and only known to be in alliance with it by their remission and return, render its discrimination a matter occasionally of no slight embarrassment.

You are sent for to a young man in previously good health, who is suddenly seized with great pain in the side, accompanied by severe vomiting, with or without acceleration of pulse, according to the time he may have been under the influence of the attack. You discard the idea of any inflammatory affection, and have little hesitation in pronouncing the case one of passing gall-stones. Nothing of the kind! Wait awhile, and your patient breaks out into a profuse sweat, and in a few hours is well; only, however, to have a repetition of the seizure on the next day or the day following.

A mother sends in terror for you to see her infant, perhaps only three or four weeks old. The child is cold; its extremities are blue; pulse almost imperceptible;—in short, the little creature appears moribund. You think of imperfectly closed foramen ovale, of internal hæmorrhage, of accidental poisoning,—you do not know what to think, and communicate your fears to the anxious parent. Needless alarm! In due course the infant becomes warm again, then hot, and finally covered with beads of perspiration. This also was ague.

You are called to a child in convulsions, or to a supposed case of brain fever; perhaps, a young woman, whom you find delirious, with quick pulse, dry tongue, and burning skin. You are strongly tempted to leech, blister, and adopt antiphlogistic treatment; but, on inquiring, find that two days preceding the young woman or the child was similarly affected, though possibly in a lesser degree. This is all-sufficient for your diagnosis, you predict a resolution by sweat, and in a few hours your patient is recovering for that time.

The next case you find in bed, with a burning skin, rapid pulse, parched brown tongue, every limb racked with pain,—in short, all the symptoms of a low, continued fever. Such you pronounce it, and order aperients and salines. To your astonishment, on calling the following day, you find your patient eating his dinner, with a moist, clean tongue, cool skin, quiet pulse; in fine, convalescent. You rejoice with him on his speedy recovery. Vain exultation! To-morrow he is worse than ever;

his tongue like brown toast; and did not the intermission enable you to call it ague, you might well be excused for pronouncing it a case of approaching typhus.

You are hastily summoned by the friends of an old gentleman to find him in a state bordering on coma. He is prostrate on the sofa, his eyes half closed, his mouth open, his pulse feeble and intermitting. He appears neither to know nor understand you, as you can elicit no answer to your questions. Reflecting upon his advanced age, you think of cerebral degeneration, of ramolissement or ossification; communicate your alarm to his relatives, and think your octogenarian friend is at length going the way of all flesh. Not at all. "Doctor!" he exclaims the next day, with his bottle of port before him, "I've had a pretty good dose of your physic, now you must take a glass or two of mine." To-morrow, of course, the old gentleman is down again; but you push quinine vigorously, and he is soon well.

All who have any extensive experience of ague will readily admit that these are no exaggerated nor fancy pictures; but are really taken from the life; indeed, I have each individual case to which I have alluded in my mind's eye at this moment.

But various and multiform as are the phases of intermittent fever or ague, still more are the protean manifestations of its kindred affection, neuralgia, which, in this neighbourhood at least, almost invariably assumes the intermittent form. It is needless to weary you with the attempt to enumerate the seats of this most painful—often excruciating—disorder. Let it suffice that wherever nerves of sensation are distributed there may it fix its seat, simulating, like hysteria, a variety of inflammatory and other serious maladies, to which, however, it bears really no affinity whatever. It is worthy of note, too, that generally speaking no derangement of the prima via, no local nor constitutional cause can be traced as originating or keeping up the disorder, most of its subjects being, during the intervals of pain, in the enjoyment of perfect health. The cause must be sought for from without, that which originates ague in one constitution giving rise to neuralgia in another.

There is no question at all that marsh miasmata constitute the direct primary exciting cause of intermittent; and although it may be reinduced in a system already rendered prone to its invasion by exposure to cold and damp—the easterly wind, foul air, mental or physical depression, impoverished diet, etc.—yet these alone are not sufficient primarily to excite a paroxysm in one who may have been fortunate enough hitherto to have escaped its onslaught.

For the last year or two ague has been unusually rife in this locality; indeed, for universality and severity, I have seen nothing like it since my first acquaintance with Faversham, now some twenty years ago. People of all ages and conditions have succumbed to it. I have been attending at the same moment patients from a fortnight old to eighty years. It has penetrated far and wide over the country, into districts where intermittent has scarcely ever before been known; and, taking into consideration the exceedingly dry character of the last two winters, the public who think of ague in connection with wet and cold are sorely puzzled to account for its ravages. My medical brethren have, however, doubtless long since come to the same conclusion as myself, namely, that to these same exceedingly dry seasons may be attributed whatever extension of ague we may have had beyond its accustomed limits. During the year 1858, meteorologists tell us that there was a deficiency of rain to the extent of six or eight inches, a very large amount; but they do not tell us that there was any material alteration in the hygrometric condition of the atmosphere. It appears to have contained its due proportion of moisture notwithstanding the earth's surface was for a considerable time preternaturally arid and dry. Whence then was this moisture derived? Obviously from such collections or natural supplies of water as might be nearest at hand; and in the case of Faversham, Sittingbourne, Milton, and the surrounding country, the supplies were necessarily drawn from the extensive tracts of marsh land in connection with the river Medway and the Swale. Evaporation here went on to an enormous, probably an unprecedented, extent; and the prevailing winds carried the miasmata thus borne aloft far and wide over the county. It will be remembered too that last winter was particularly mild, there was almost no frost, and consequently little check to the vegetable decomposition which, rapid in warm weather, is generally suspended more or less during the colder months. Every circumstance, then, was favourable to the generation of the miasmata which we acknowledge as prime source of ague. One curious instance I met with of the direct and immediate influence of marsh effluvia. It occurred in a gentleman connected with the oyster fishery, who, as often as he took a short cut across one particular marsh to the oyster beds, was seized with ague; but on making a circuit of a mile and a half out of the direct route, he as invariably escaped.

After no inconsiderable experience of intermittent fever, I must confess that my notions of its pathology are of the cloudiest character. It is easy to comprehend the sequence of phenomena constituting the fit; but why, after this, a state of perfect health should supervene—why, in twenty-four, forty-eight, or seventy-two hours, there should be a recurrence of the attack—why this should be repeated at regular intervals, again and again—why a few doses of quinine should immediately break this chain of action—why a strong mental impression, as from the effect of so-called charms, should sometimes accomplish an instantaneous cure, tending to the inference that ague is purely a nervous disorder—why, precisely at the end of a fortnight, or, as the popular idea is, at the change of the moon, if quinine be early discontinued, the fit should recur, not certainly invariably; but by no means infrequently. All these are matters to my mind involved in utter mystery, and I doubt whether our pathology of intermittent is very much in advance of what it was two hundred years ago. Even the learned Sydenham, who generally contrives to find some quaint reason for everything, and explains the most recondite phenomena of disease, completely to his own if not to our satisfaction, after sagely discoursing upon the turgescence, fermentation, and despumation of the blood, says, in allusion to the *hidden fomes* not pursuing its effervescence alike in all agues, "for sometimes it requires one day, sometimes three, before it comes to maturity and makes a new fit. I say, if any one should inquire about this matter, I would plainly confess I knew not, nor has any other that I know, sufficiently explicated this hidden work of nature."

He has an ingenious way of accounting for the long persistence of ague in the system by regarding it as an ordinary fourteen or twenty-one day fever, eliminated, or carrying on its fermentation at intervals instead of continuously; for example, a quartan, he says, lasts six months, and allowing five hours and a half for every fit, you will find at the end of this period it has occupied exactly three hundred and thirty-six hours, or fourteen days, and so of the other forms. In our time, unless ague take its departure after two or three shakings, medical aid is had recourse to, so that when its natural termination might arrive it is difficult to say; but I fancy it would display a most uncertain and irregular character.

We do not find, at all events in this neighbourhood, that agues inflict any severe or permanent injury on the constitution, the enlarged spleen or ague-cake is not often detected; perhaps, not often enough looked for; for these disorders, from their frequency, come to get treated as matters of routine. At all events, save temporary internal congestions which, for aught I know, may be the cause and not the effect of the paroxysm, we do not find evil consequences arise. Of course there are exceptions, but I can only call to mind one family in whom life was really imperilled by continued exposure to marsh miasmata. These people had removed from a more inland district to the borders of a marsh; they immediately became aguish, and, unless constantly under the counteracting influences of quinine, continued so. The once sturdy, ruddy children grew white, thin, flabby, and the youngest, an infant, died. The father, formerly robust, strong, and energetic, became pallid, feeble, and seldom fit for work. The mother fared worse still; for, in addition to the failing powers which she shared in common with the rest of the family, she was frequently suffering from attacks of what I then considered hepatitis, although subsequent experience has led me to conceive that these might possibly have been only neuralgic seizures; still, accompanied as they were with a very rapid pulse and acute pain, one was fearful of not treating them in some degree antiphlogistically. At length the poor woman became gradually so utterly prostrate and anæmiated—her pulse, a mere thread, always ranging over 120—her aspect that of one dying of hæmorrhage—that her husband consented to have her lifted from her bed, put into a cart, and brought to Faversham; a removal of not more than two miles. He and his family followed. From that moment they one and all began to improve, and to this day there is not a more hard-working, hearty, and robust family in the neighbourhood. This is, I say, an extreme case, such as I have met with once and only once. These people, it will be observed, were new comers; and new comers, I need scarcely tell you, always suffer most.

The acclimatised, or the natives, who are "to the manner

born," if they have ague do not appear to mind it. One old man I remember, who lived in a cottage on the marsh, and rejoiced in the ever green name of "May," continued in blossom for 101 years, notwithstanding he took his turns of ague with the rest.

In a disease concerning the pathology of which our notions are so indefinite and vague, it is no marvel that our treatment partakes of the empirical; nevertheless, we may boast of having made some advance since the days of Sydenham, who says, "As to the cure of spring agues, I ever thought they were to be left to themselves without doing anything, because I never knew any one destroyed by them; and, on the contrary, that those who endeavoured to cure them made them only more obstinate and lasting."

We all now cure ague with the disulphate of quinine; but I am afraid none of us would give a very lucid explanation of its *modus operandi*, notwithstanding we look upon it almost as specific. Our intermittents here, with scarcely an exception, are all amenable to this remedy. We precede its administration by a calomel purge, repeating this, if there be hepatic congestion, as often as may be required; push the quinine, not waiting for a clean tongue, to the extent of about twenty grains in the interval, and if our patient does not escape the next threatened attack, which, however, he frequently does, we may safely promise him immunity from any further seizure.

In obstinate cases, we combine the liquor potassæ arsenitis with the quinine. Arsenic alone requires time to produce its effect on the system, and we have seldom patience to wait when the more speedy remedy is at hand. In those cases which recur at the end of a fortnight, a few doses taken on the day or two preceding the expected ague-fit prove effectual in preventing it. The same mode of treatment is generally applicable to neuralgia in its multitudinous forms, although it must not be expected that these should yield so readily as simple intermittent fever; but quinine is still *the* remedy, in combination either with steel or arsenic. I have had little experience of the hydrochlorate of ammonia, so frequently prescribed by Dr. Watson, quinine proving all-sufficient for our needs; and I doubt not this is the experience of every one practising in localities where marsh miasmata are engendered. Change of air, provided it be sufficiently far from any source of malaria, is equally efficacious in arresting the disorder, but patients frequently have it again soon after their return; indeed, in those who are susceptible to the influences of marsh poison, nothing short of an entire removal will wholly do away with the liability to an occasional attack, a measure, however, unnecessary to be thought of so long as we have at command an antidote so powerful and efficacious as the disulphate of quinine.

## CASE OF HÆMATURIA: CANCER OF BLADDER AND KIDNEYS: TUBERCLE IN LUNG.

By John W. Goodwin, M.D., Physician to the Suffolk General Hospial, Bury St. Edmund's.

T. J., aged 60, by trade a plasterer, first consulted me in December 1856. His history was that until two months previously he had enjoyed good health, when he was seized with pain in the loins, and suffered some pain at the time of passing water over the region of the bladder; this pain extended down his thighs; he also experienced a difficulty in passing water for the first time in his life, and observed that he passed one day about three tablespoonfuls of blood, after endeavouring to pass urine. Since this time he had occasionally passed quite clear urine, but it usually contained a good deal of blood. When I saw him, he looked sallow and cachectic, and his pain in the loins was very great and constant, and caused him to endeavour to pass urine very frequently. Pressure over the bladder did not cause pain. There were two enlarged inguinal glands on the right side. After passing urine, he suffered pain at the end of the penis. He had never observed the stream of urine to be forked or stop suddenly. I directed him to be cupped every other day to a small amount of blood, and to apply the glasses for a considerable time each day, and to take ten grains of gallic acid with henbane and infusion of roses three times daily, and to keep in bed.

Upon examining his urine under the microscope, I found pus globules, red and white corpuscles of blood in large quantities, squamous epithelium, with large granular nuclei and nucleoli; large round epithelium containing many resplendent granules, probably from the fundus of the bladder; and caudate and round cells with resplendent granules. I made a great many examinations during the time the patient was under my care, with the same results.

I tried lead and other styptic medicines without any marked effect, and he continued much in the same condition for three weeks, when I gave him the tincture of sesquichloride of iron in frequent small doses. He then continued about five days without passing blood, when he began to suffer from incontinence, and also from tenesmus and constant desire to evacuate the bowels. He was evidently getting weaker daily, and sank gradually, and died on the 17th January, 1857.

A *post mortem* examination was made on 19th January. The left lung, adherent at the apex to the costal pleura, contained several little masses of tubercular deposit, many in a state of suppuration, and several little cavities, of about the size of peas. The right lung was healthy. The heart was healthy. The liver contained one mass of cancerous matter, of about the size of a walnut, in the anterior part of the larger lobe; this tumour was not encysted nor prominent from the surface, but was solid throughout, and somewhat denser than the hepatic tissue. The right kidney was slightly enlarged, and, with its cortical and intertubular portions, was white and condonsed. There was no mottling or granulation of the surface, the capsule readily peeling off. The left kidney was much larger than the right, with much cortical and interconical deposit. The bladder was much contracted; its walls were thickened to four or five times their natual size by the deposit of an uniform whitish material. From its mucous surface sprouted several small lobulations, having the same whitish appearance; there was no blood on their surface, but two small clots were found in the cavity of the bladder. The largest of these outgrowths was situated just behind the prostate, and was as large as a hazel-nut.

Such were the morbid appearances found; and my friend, Dr. Eade, was good enough to assist me in the microscopic examination of the morbid specimens.

The contents of the small pulmonary cavities were chiefly granular tubercle-corpuscles, masses of molecular matter, pus globules, and large oil globules, with one or two fragments of yellow elastic tissue. The juice scraped from the white tumour in the liver, showed myriads of very transparent cells of all conceivable forms; some contained one, others two or more nuclei, these nuclei containing nucleoli; some cells contained a large number of resplendent granules. The fluid scraped from the yellowish-white intertubular deposit in the right kidney showed cells rather smaller than those in the liver; many rounded, others fusiform, or variously shaped; most of them with a large and very distinct nucleus, and all granulated on the surface, some with two or more nuclei. The fluid from the left kidney contained a great many cells, but of smaller size, more like pus with bright central globules; here and there a caudate cell of a larger size was seen. Much free oil was present. The bladder-tumours were evidently medullary; and they were examined, with similar results as above.

Remarks. Hæmaturia, as is well known, depends on a variety of causes, and in some cases it is often rather doubtful as to what the immediate cause may be, or where it is situated. Dr. Watson says in his *Lectures* that, as a general rule, most cases of hæmaturia, which appear to be doubtful, will prove to be renal. I think this is the case, but still I think that we have such a powerful assistant in the microscope, that our difficulties of diagnosis are very much diminished. In this case, after one or two examinations of the urine, which was like porter and deposited very little sediment, I found such unusual appearances for urine, that I at once suspected the nature of the case—such cells, so constant and of such complicated character, could indicate, I imagined, nothing but cancer, and that of the bladder, and an opinion to that effect was expressed.

I have thought it desirable to publish this case, as it is, I think, interesting as regards the microscopic information which I obtained, and also that it furnishes an instance of an exception to the law which asserts that cancer and tubercle do not coexist in the same subject. There were no pulmonary symptoms during life, so that I never examined the lungs; but had I done so, no doubt there would have been auscultatory evidence of the tubercular disease, as there were small cavities, as well as softening tubercle. I should consider the disease in the bladder to be primary, and that in the kidneys and liver secondary deposit.

# A Course of Lectures
ON
# URINE, URINARY DEPOSITS, AND CALCULI.

DELIVERED AT THE PATHOLOGICAL LABORATORY, DURING THE SESSION 1857-58.

BY
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## Lecture IV.

URINE IN DISEASE. *Arrangement of the Subject. Diathesis.* EXCESS OR DEFICIENCY OF WATER AND THE ORGANIC CONSTITUENTS PRESENT IN HEALTH. *Excess of Water: Diabetes Insipidus: Deficiency of Water: Increased Acidity of Urine: Principles of Treatment: Nitric Acid in the Urine: Ammonia: on Detecting Urea in the Blood or Serum: on Detecting Ammonia in the Breath: Urea; Excess of Urea; Deficiency of Urea: Colouring Matter: Excess of Uric Acid and Urates: Principles of Treatment: Extractive Matters: General Remarks on the Increase of the Organic Constituents, with Analyses: Analyses of Urine in Chorea: Analyses of Urine in Skin-Disease.* EXCESS OR DEFICIENCY OF THE INORGANIC CONSTITUENTS PRESENT IN HEALTH. *Chloride of Sodium; its Diminution in Acute Inflammations: Sulphates; Increase in Cases of Chorea, Rheumatic Fever, etc.: Influence of Remedies: Alkaline Phosphates; Increased Secretion of Alkaline Phosphates in Inflammation of the Brain; Analyses; Earthy Phosphates; Increase in the Urine of Cases of Mollities Ossium; Analyses.*

### Urine in Disease.

BEFORE I describe in detail the particular characters in which a specimen of urine may differ from the secretion in its normal state, it is desirable to consider one or two questions of general interest, which can be more advantageously discussed here than in a future part of the course. It is also necessary that I should give you a sketch of the order in which the subject will be treated of.

Many alterations in urine, which have been termed "*morbid*", really depend upon increased or diminished activity of the same chemical changes which occur in health. It is often very difficult to decide how far an alteration in the quantity or quality of the constituents should be attributed to physiological changes, or referred to morbid actions. We must also carefully bear in mind that important changes often occur after the urine has been passed, and may be due to the action of the air, fermentation caused by the presence of mucus, and a number of other circumstances. There are many alterations in the urine, depending upon a temporary derangement of those actions which occur in a state of health, which would not be properly described under the term healthy, but which, nevertheless, cannot properly be called morbid. I do not attempt, therefore, to divide *accurately* healthy urine from morbid urine, and only wish you to look upon this as a sort of rough artificial division, adopted for convenience alone. Indeed, all such divisions are quite artificial; and no one attempts to assign accurate limits even to large and important branches of natural science, as anatomy, physiology, histology, botany, medicine, surgery, etc., which, merely for convenience, are treated of as separate subjects.

The functions of digestion, respiration, and circulation, are intimately concerned in the formation of those substances which are removed from the system in the urine. The characters of the secretion are much affected by the state of the skin and the action of the liver; and there are many other circumstances which may cause an alteration in the urine, independently of those numerous affections to which the urinary organs are exposed. Disease of the secreting structure of the kidney, or of any part of the complicated and extensive efferent channel by which the urine is carried off from the gland, may cause very important alterations in the characters of the secretion. Now, it is of great importance to us, as practitioners, to know that an examination of the urine materially assists us in endeavouring to ascertain the exact nature and precise seat of the derangement. Sometimes we are able to diagnose the morbid alteration from an examination of the urine alone; but in almost all cases an examination of the secretion affords important information bearing on the nature of the case. Certain substances, which are ordinarily eliminated in the urine, may, in consequence of morbid actions having been set up, be attracted to other parts of the body, or be eliminated through other channels. When the kidney itself is affected, the morbid condition may be temporary or permanent; and this can often be ascertained with certainty by examining the urine. The mucous membrane of the pelvis of the kidney, of the ureter, or of the bladder, may be the seat of the lesion, and thus the characters of the urine may be altered in a very important manner; or lastly, a certain effect may be produced by the growth of adjacent tumours, by causing pressure, altering the structure of the organs, etc.

The *ordinary constituents* may be in greater or less proportion than in health, or certain *soluble substances* not met with in the healthy secretion may find their way into the urine. As I have before remarked, a little mucus from the urinary passages is the only deposit which occurs in health. In disease, *insoluble deposits* are commonly met with. Substances which are comparatively, though perhaps not absolutely, insoluble (being soluble in a very large quantity of the secretion), may float upon the surface of the urine, or may be suspended throughout the fluid.

By *microscopical examination*, combined with chemical tests, we can make out the nature of a deposit. By *chemical analysis* alone, we can ascertain an abnormal proportion of substances present in health, or estimate the quantity of such as are not found in the healthy secretion.

*Diathesis.* Let me now ask your attention for a few minutes to the question of diathesis. The "uric acid", the "phosphatic", the "oxalic", the "sulphuric" *diatheses*, and others, are constantly spoken of. It is well that we should try to discover exactly what is understood by this term in such frequent use, and consider whether any real advantage is gained by employing it in the manner in which it is generally used. Although this word has been employed by very high authorities since the time of Dr. Prout, there appears to be some objection to its use as an explanation of the causes of the production of urinary deposits.

In the first place, with reference to the *uric acid diathesis;* this term has been applied to all cases in which the urine habitually contains deposits of uric acid and urates. This precipitation of uric acid in an insoluble form is due to a change taking place in the urine, at least in the majority of instances, after it has been secreted. Excess of uric acid may exist in the urine in two states, *dissolved in the fluid*, and in the form of an *insoluble deposit*. In the first case, the practitioner would not be cognisant of the excess; and a person may be passing a very considerable quantity of urates, in a state of solution, for a long time, without any notice being taken of the fact. On the other hand, a patient's urine may contain only the healthy proportion of uric acid; but this, owing to a change taking place after it has left the bladder, might be deposited in an insoluble form. From this circumstance alone, it would be inferred that the last patient had a disposition to the formation of a large quantity of uric acid (*uric acid diathesis*), while really there might be a much larger amount produced in the former instance.

Persons whose urine has deposited triple phosphate and phosphate of lime have been said to suffer from the phosphatic *diathesis;* while the deposition of the sediment depends, at least in the great majority of cases, upon a change effected in the urine after it has left the secreting part of the organ, and has not necessarily anything to do with the habit of body or peculiarity of constitution, or with the state of the blood.

Dr. Bence Jones defines the phosphatic diathesis and the sulphuric diathesis in the following terms:—"What I wish to impress upon you now is, that the true phosphatic diathesis—that is, the occurrence of an excess of an alkaline and earthy phosphates in the urine—may not make itself apparent to the eye. The alkaline phosphates may be present in an inordinate excess; and, as in the sulphuric diathesis, the sulphates may be immensely increased," etc. (Lectures on Digestion, Respiration, and Secretion, *Medical Times and Gazette*, March 27th, 1852.)

Now, in these cases, what is observed is, that a greater proportion of certain constituents is excreted in the urine than occurs in perfect health. The different physiological conditions under which an excess of many is produced are well un-

derstood, and the result cannot be referred to any peculiar habit or diathesis. If we speak of the *sulphuric acid diathesis*, we must, of course, admit the *urea diathesis;* for usually, when the sulphates are in excess, a corresponding increase in the proportion of urea exists. On the same principle, we might speak of the *extractive diathesis* and the *water diathesis*. It would be quite as fair to talk of the *carbonic acid diathesis* when an increased proportion of carbonic acid was exhaled, etc.

Many of the above remarks will apply to the so-called *oxalic diathesis*. The presence of these substances, and the increase of those materials which exist in health, depend upon the action of well known laws, and result as the natural consequence of confinement, exposure to cold, particular food, etc. No peculiar diathesis can be discovered in persons who pass urine having these characters: in fact, in the majority of cases, the peculiar condition is only of temporary duration; and it therefore seems to me that the term *diathesis* is quite inapplicable. We may perhaps speak of the *gouty diathesis*, and of the *rheumatic diathesis*, with more propriety, because here there certainly is a peculiarity of constitution, which may be transmitted from parent to offspring, and which is characterised by the invariable presence of certain morbid actions which exist in the conditions familiar to us under the terms *gout* and *rheumatism*. But of the actual state of the blood, and condition of the vital processes, which lead to the symptoms with which we are so familiar, we really know very little; so that it seems to me better, even in this case, to discard the terms, and say that a patient suffers from attacks of gout or rheumatism, instead of attempting to hide our ignorance of the essential nature of these morbid states under a learned term, the meaning of which cannot be well defined. I shall venture, then, to discard altogether the use of the word *diathesis* in the discussion of morbid states of the urine; and I think we shall be in a better position to investigate the causes of changes occurring in the urine in disease, and to study the manner in which urinary deposits are formed.

I propose to draw your attention to the subjects in the following order:—First, cases in which there is excess or deficiency of any of the normal constituents of urine. Secondly, I shall refer to the characters of certain soluble substances in the urine in disease, which are never met with in a state of health; and then propose to give a brief sketch of the anatomy and physiology of the kidney, including some of the most important morbid changes which occur in the organ, especially with reference to the formation of casts of the uriniferous tubes. This leads us to the subject of *urinary deposits;* and we shall consider the various plans for collecting and preserving them, and the characters of the extraneous matters which are often present accidentally. The insoluble substances constituting *urinary deposits* will be divided into—

*a*. Substances floating on the surface of the urine, or diffused through the fluid.
*b*. Light and flocculent deposits.
*c*. Dense and opaque deposits.
*d*. Granular and crystalline deposits.

The subject of *urinary calculi* follows next in order; and lastly, I propose to draw your attention to the apparatus of use for the microscopical and chemical examination of urine, urinary deposits, and calculi; the volumetric analysis of urine; and other points of practical importance in investigating the characters of the secretion.

Let us now proceed to the consideration of specimens of urine, in which an excess or deficiency of the normal constituents of the secretion is observed.

### Excess or Deficiency of Water and the Organic Constituents.

*Water*. The varying quantities of water removed from the body, in different physiological states of the system, have been already referred to. We are all familiar with the relations existing between the functions of the skin and intestinal canal and the kidneys. The same laws hold in disease. If the kidneys be diseased, and the intestinal canal, the skin, and the respiratory apparatus, be tolerably healthy, the latter to some extent fulfil the work of the kidneys. In skin-diseases, and in certain affections of the intestinal canal, increased work is thrown upon the renal apparatus. In the treatment of such cases, the practitioner must bear in mind the existence of these relations. There are, however, certain affections in which the quantity of water removed from the body is greatly increased. In various hysterical and other emotional affections, large quantities of pale urine, containing but a small quantity of solid matter, are frequently voided. Some persons habitually pass very dilute urine, which is not very easily explained, but is probably to be looked upon as an individual peculiarity, corresponding to the constant sweating, and to the unusual amount of action of the alimentary canal, occasionally met with in persons who enjoy good health. It has been already remarked, that water increases the disintegration of tissue; and when a large amount of fluid is taken, the total quantity of solids removed in the urine is greater than in health. When the solids as well as the water are greatly increased in quantity, we should be led to fear the existence of diabetes. An unusual quantity of urine, of very high specific gravity, and therefore containing a large amount of solid matter, is almost characteristic of this condition.

*Diabetes Insipidus*. The majority of the so-called instances of diabetes insipidus are cases in which there is great thirst, and a large amount of water is removed from the kidneys daily (*diuresis*); but the total quantity of solid matter is not above the normal standard. In a few of the cases recorded, it would appear that the latter is also much increased; but these must be very rare. There is no sugar in these cases. I have seen cases in which the quantity of water passed as urine was two or three times as great as that said to have been taken in the food; but I firmly believe that deception was practised, and that the patient got water by stealth. Of this condition, termed by some authors *diabetes insipidus*, I know but little. I do not think that the condition is sufficiently well characterised to give to it the title of a distinct disease; I believe it depends merely upon a large quantity of water having been taken. The following analysis represents the composition of the urine in one of these cases. It was obtained from a man aged 45, in King's College Hospital, under Dr. Todd, who was passing about eleven pints of urine *per diem*, while he was drinking about thirteen pints of liquid. Reaction feebly acid; specific gravity 1002·8.

*Analysis* 1.

| | | | In 24 hours. |
|---|---|---|---|
| Water . . . | 995·91 | | |
| Solid matter . . | 4·09 | 100·00 | 394 |
| Organic matter . | 2·79 | 68·22 | 268 |
| Fixed salts . . | 1·30 | 31·78 | 125 |

The quantity of urea excreted in twenty-four hours in this case was very small, which confirms the observation of Bischoff, that the ingestion of a large quantity of water diminishes the excretion of urea. At first, the total quantity passed in twenty-four hours is above the average, because much is washed out from the tissues by the large quantity of fluid; but afterwards it falls, because less is formed in the organism than under ordinary circumstances. The proportion of inorganic salts to the organic constituents of the urine is very high, though the total quantity is less than is passed in health.

*Deficiency of Water* is, in the great majority of cases, associated with an abnormal quantity of solid matter. The ingredient which is usually in excess, and to which the urine owes its great density, is urea; so that urine of this character will be more conveniently considered presently. There are cases in which a very small quantity of urine, containing but a small percentage of solid matter, is passed; but in these *albumen* is present, and they will be considered under this head. When the total amount of urine is very small, and the secretion contains but little solid matter, the secreting structure of the kidney will probably be found to be very much impaired; and it is necessary to endeavour to make other organs take part in eliminating from the system substances which normally pass off in the form of urine.

*Increased Acidity of Urine*. The causes of the reaction of healthy urine have been already considered in Lecture I, and it is therefore unnecessary to pursue this part of the subject farther. Vogel states that, in chronic and acute diseases, the quantity of free acid is diminished for the most part. In many cases of pneumonia and rheumatic fever, however, the quantity of free acid is much greater than in health.

A highly acid condition of the urine, persisting for a long period of time, may cause the precipitation of uric acid, and so lead to the formation of a calculus. Acid urine not unfrequently causes irritable bladder, and excites other morbid actions. In most cases, the salts of the vegetable acids (citrates, acetates, tartrates) will be found more efficient in counteracting this acid state of the urine, than alkalies or their carbonates, and are less likely to interfere with the digestive process. There are, however, low conditions of the system in which the acid state of the urine, and a tendency to the deposition of uric acid in large quantity, are not relieved by alkalies;

on the contrary, such cases are often much benefited by an opposite plan of treatment—tonics and the mineral acids before meals, a nourishing diet, with a moderate supply of simple stimulants with a little alkali, or given in alkaline waters. Pepsine is often of great use in these cases. Many of them seem to be intimately connected with impaired digestive power. The acid state of the urine may then depend upon very different conditions of the system, and these must be carefully considered in each individual case before any plan of treatment is suggested.

An *alkaline condition* of the urine may be due to several causes, and requires, therefore, to be treated on different plans. The connexion between an alkaline state of the urine, depending upon fixed alkali, and the secretion of a highly acid gastric juice, has been already referred to. In such cases, attention must be paid to the state of the digestive process; and, when this is set right, the urine will regain its normal characters. Dr. Bence Jones (*Medico-Chirurgical Transactions*, vol. xxxv) alludes to three cases of dyspepsia with vomiting of a very acid fluid (two of them rejecting sarcinæ), in which the urine became alkaline from the presence of fixed alkali when the quantity of acid set free at the stomach was very great; but, when this was small, the reaction of the urine was acid. It must, however, be borne in mind that the very acid nature of the materials rejected in many cases of vomiting, and especially in cases of sarcinæ ventriculi, arises, not from the secretion of an acid fluid by the glands of the stomach, but from the decomposition or fermentation of the food when acids are developed, among which may be mentioned acetic, lactic, and butyric acids. At the same time, there can be no doubt that, in many cases of dyspepsia, the feebly acid or alkaline condition of the urine arises from the secretion of an abnormal amount of acid by the stomach. "The degree of the acidity of the urine may, to a certain extent, be regarded as a measure of the acidity of the stomach." (Dr. G. O. Rees, *Lettsomian Lectures*, 1851.)

Dr. Rees has drawn attention to a large class of cases in which he explains the alkaline condition of the urine as follows:—Urine which is highly *acid* at the time of its secretion, irritates the mucous membrane of the bladder, and causes it to secrete a large quantity of *alkaline fluid*. This mucous membrane in health secretes an alkaline fluid, to protect its surface, just as occurs in the case of some other mucous membranes. Under irritation, more alkaline fluid than is just sufficient to neutralise the acid of the urine is poured out; and hence the urine, when examined, is found to have a very alkaline reaction. In such cases, this highly alkaline condition is removed by giving liquor potassæ or some other alkali, or a salt of a vegetable acid which becomes an alkali in the system. The urine is not secreted so acid, and therefore does not stimulate the mucous membrane to pour out so much alkaline fluid. I know no observations to contradict Dr. G. O. Rees' explanation of the fact that, in some cases, *alkalies cause the urine to become less alkaline, or even restore its acid reaction;* yet one would hardly expect, if this be the explanation in cases generally, that the natural reaction of urine would be acid. If there was danger of the healthy mucous membrane suffering from the contact of a fluid only a little more acid than that destined to be continually touching it, should we not expect it to have been of such a character as to resist this action like the mucous membrane of the stomach, instead of being excited to secrete a fluid of such a nature as might lead to its own destruction? Again, the mucous membrane of the bladder bears very well the contact of acid fluids which are sometimes injected; and patients sometimes for years pass intensely acid urine, without the secretion of this excess of alkaline fluid from the mucous membrane.

*Nitric Acid in the Urine.* Dr. Bence Jones (*Philosophical Transactions*, 1851, p. 399) has been led to the conclusion that ammonia, in its passage through the organism, gives rise to the production of a certain quantity of nitric acid, which is eliminated in the urine. He found that the acidity of the urine was not diminished by giving large quantities of carbonate of ammonia; and that, in some instances, the acid reaction seemed to be increased. While tartrate of potash soon rendered the urine alkaline, this effect was not produced by the corresponding salt of ammonia.

The following test, suggested by Dr. Price, was employed for the detection of the nitric acid, in preference to the indigo test. By this plan, one grain of nitrate of potash dissolved in ten ounces of urine was detected with the greatest certainty. From four to eight ounces of urine were mixed with half an ounce of strong and pure sulphuric acid, free from nitric acid. Two-thirds of the mixture were distilled over; and, after being neutralised with pure carbonate of potash, the distillate was evaporated to a very small bulk. From a drop, to half the residue, was mixed with the following test-solution. To a solution of starch, a drop or two of a solution of iodide of potassium, specific gravity 1052, and very dilute hydrochloric acid, specific gravity 1005, were added. If nitric acid is present, the iodine is set free, and a blue iodide of starch is at once formed.

Another portion of the residue was placed in a basin, and a very small quantity of indigo, with excess of sulphuric acid, added. If nitric acid was present, upon applying heat for a few minutes, the colour of course disappeared.

From numerous experiments, varied in many ways, Dr. Bence Jones came to the conclusion that ammonia in the organism is partly converted into nitric acid. The nitrogen of the air also, in ordinary combustion, unites with oxygen to form nitric acid. Urea and caffein, and other substances containing nitrogen, give rise to the formation of a small quantity of nitric acid. Although Lehmann has failed to confirm these results, he has not, I think, succeeded in shaking the evidence in favour of this view. Dr. Bence Jones brings forward several cases of healthy persons whose urine did not yield a trace of nitric acid; but, three or four hours after they had taken carbonate of ammonia, evidence of the presence of the acid was afforded by the starch and also by the indigo test. After twelve hours, only a trace could be detected; and, in twenty-four, even this ceased to be perceptible. The urine was examined in precisely the same manner in every case. I think, therefore, we may conclude that a small amount of ammonia in the organism is converted into nitric acid; and it is not improbable that, under certain circumstances, the quantity of nitric acid formed in this manner may be very much increased.

*Ammonia.* Numerous experiments seem to show that in health a small quantity of ammonia escapes in the urine. Neubauer has conclusively proved that certain ammoniacal salts pass through the organism, and may be detected in the urine unchanged. Ammonia, as is well known, is very easily produced by the decomposition of the urea; but it is almost certain that a small quantity passes into the urine from the blood, independently of that derived from this source.

In disease, the quantity of ammonia present in the urine is often so great as to be smelt all over the room in which the patient lies; but in these cases the ammonia arises from the decomposition of the urea after the urine has left the bladder, and in some it is decomposed even while it yet remains in this viscus.

It is doubtful if a large amount of ammonia under any circumstances accumulates in the blood afterwards to be excreted in the urine, as it is probable that, if formed, it would escape more rapidly from the lungs or intestinal canal. The doctrine that the coma occurring as a sequel to many cases of kidney-disease, depended upon the accumulation in the blood of ammonia produced by the decomposition of urea, was originally put forward by Frerichs. In some of these cases of renal coma, ammonia is present in abnormal quantity. In others, neither urea nor ammonia can be discovered in the blood, while sometimes urea can be detected without difficulty. Let me allude briefly to two or three cases, in which urea was discovered. Half an ounce of blister serum from a man suffering from renal coma yielded ·54 gr. of nitrate of urea. The patient died shortly afterwards, and urea was detected in the blood and in the brain substance. In another insiance, it was detected in the serum of a blister from a man who had had one epileptic fit, depending upon renal disease. In the case of a boy, aged 18, who suffered from epileptic fits, I also detected it in blister serum; as well as in eight ounces of serum from a man suffering from acute dropsy of a week's duration; and I might refer to others in which I obtained undoubted evidence of the presence of urea. There are many other cases of the same character in which I failed to detect urea, or ammonia resulting from its decomposition.

I have several times examined the breath of such patients, without being able to obtain indications of a larger quantity of ammonia than is afforded by healthy persons. I think, therefore, that we must admit that there are many cases of the so called *uræmic poisoning* which have not yet been satisfactorily explained. It may, however, be urged that, in many cases, although ammonia was found, it might have been rapidly eliminated from the skin or intestinal canal, so as to escape detection. Bernard and Barreswil have performed some experiments which prove that, after extirpation of the kidneys, urea escapes into the intestinal canal in the form of an ammo-

niacal salt; and they found that it could not be detected in the blood in less than from twenty-four to forty-eight hours after the operation, when the animal had become weak and exhausted.

*On detecting Urea in the Blood or Serum.* The urea may be detected by concentrating the serum and extracting with strong alcohol, or the fluid may be evaporated to dryness and the dry residue treated with boiling alcohol. The alcoholic solution is evaporated to dryness, treated with a drop of distilled water, and two or three drops of strong nitric acid allowed to fall into the syrupy solution. If urea be present, crystals of the nitrate

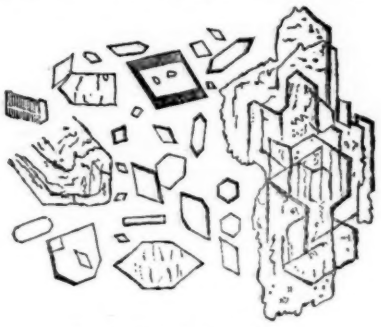


Fig. 2.—Nitrate of Urea x 215.

of urea are formed, and may be readily distinguished by microscopical examination.

*On detecting Ammonia in the Breath.* The method of examination which Dr. Richardson recommends is the following. An instrument in the form of a straight breast pump is employed to breathe through; a drop or two of hydrochloric acid is placed in the bulb, and a perfectly clean slip of microscope glass placed across the trumpet extremity of the tube, and secured by an India-rubber band. The alkali, as it passes over the

Fig. 3.—Crystals of Chloride of Ammonium obtained by breathing over hydrochloric acid.

bulb, combines with the acid, but some of the acid and alkaline vapours pass over together and condense on the microscope glass. As this becomes dry, crystals are formed. In health, traces of ammonia are always found in this manner.

[*To be continued.*]

University of Oxford: Dr. Radcliffe's Travelling Fellowship. The following notice has been issued by Dr. Acland, Regius Professor of Medicine:—In conformity with an ordinance of the University Commissioners, the electors under the will of Dr. Radcliffe have directed that an examination for a travelling fellowship shall be held in the course of next term. The Examiners will hereafter notify the particulars of the examination, which will be in sciences connected with medicine. The successful candidate will receive £200 per year for three years, half that time being occupied in medical study out of Great Britain. One such Fellowship will henceforward be offered for competition every year. Those may be admitted as candidates who have taken a first class in the Natural Science School of Oxford, and who intend to qualify themselves to practise medicine as medical graduates of the University.

# Transactions of Branches.

## EAST ANGLIAN BRANCH.

### CONGENITAL HERNIA (HERNIA INTO THE VAGINAL PROCESS OF THE PERITONEUM): SUPPLEMENTARY SAC OR POUCH.

By T. W. Crosse, Esq., Norwich.

[*Read July 8th, 1859.*]

This specimen was taken from a man, aged 60, who was admitted into the Norfolk and Norwich Hospital, on the night of May 23rd, 1859, with symptoms of strangulated hernia. The history he gave of himself was that for the last eight years he had had a rupture on the right side, a portion of which always remained in the scrotum. He had never worn a truss, and had been able to follow his occupation as a labourer. On the morning of his admission, and without any apparent cause, his rupture became much larger, and he suffered during the day from sickness and vomiting. A medical man who saw him towards evening, did not make any attempts to relieve him by the taxis, but sent him up at once to the hospital, where he arrived about 10 P.M.

On admission, he was in a very weak and enfeebled condition, with a swelling of considerable size occupying the right inguinal region and scrotum. This swelling might be divided into three parts: *an inguinal*, in the region of the inguinal canal; *a scrotal portion*, which was large and globular; and a *third part*, rounded and smaller, situated over the femoral vessels. The separation between the inguinal and scrotal portions was distinctly marked by a folding in of the skin, and was probably caused by the tightened and stretched condition of the external abdominal ring. The scrotal portion was large, round, and tense, and presenting much the appearance of hydrocele. The testicle could not be detected on manipulation. The swelling over the femoral vessels suggested the possibility of a femoral rupture complicated with hydrocele; but the intimate relation between all three of the portions described, indicated their being contained in a common sac, which had evidently passed through the inguinal canal.

Careful attempts were made to effect reduction by the taxis, both in and out of the warm bath, but without avail. The symptoms of strangulation were not urgent, there was no vomiting or even sickness now present. Neither the body nor the tumour was painful, and the bowels had been freely relieved on the previous day. Under these circumstances, it was thought better to postpone an operation until the morning, and a freezing mixture was accordingly ordered to be kept constantly applied, and an injection to be administered. The injection brought nothing away. Vomiting recurred during the night, and again on the following morning, when his pulse stood at 120, and he was more feeble and exhausted. An operation being at once demanded, I cut down upon the tumour and exposed the sac, which at its lowermost part was greatly attenuated, and yielded to the pressure of the director, when introduced under the fascia that covered it. Several ounces of dark coloured serum escaped, and on enlarging the opening it became evident that the intestine was situated in the cavity of the tunica vaginalis; the swelling in the femoral region consisting of a pouch of the same membrane, and containing also intestine. The bowel was a good deal discoloured, and covered with clots of bloody lymph; the coils were matted together by inflammatory adhesion, which were gently separated. The seat of stricture, as usual, was at the neck of the sac, which was incised so as to admit of the easy return of the intestine, a very large portion of which had been strangulated.

The wound was closed by sutures, and the requisite compresses and bandages applied. Chloroform was not given, and stimulants were freely administered both during and after the operation; but he never rallied, although all sickness ceased; and he sank in about seven hours, from collapse.

On examination after death, there was no general peritonitis manifest; and the strangulated portion, consisting of about eighteen or twenty inches of ileum, though very much congested, was not gangrenous or mortified; it was slightly adherent to the neck of the sac. The testicle was found situated in the inguinal canal, the cord lying behind it. The pouch in the femoral space had passed beneath the fascia, and lay just above the saphenous opening, through which it could easily be made to protrude. The patient was of a very spare habit, and much emaciated. The veins contained scarcely any blood. The other viscera were healthy.

Remarks. Varieties in the form and shape of hernial sacs have been frequently noticed by authors, and are presumed to result either from the unequal pressure of their contents, or the unequal strength of their surrounding parts. The situation of that in the case I have now detailed constitutes its peculiarity, and is very unusual, occasioning, as it very nearly did, a femoral hernia, owing to its relation to the femoral vessels and the saphenous opening, and making its way towards this point, above instead of below Poupart's ligament. Looking at the mouth of this pouch, I think it quite possible that it might have been a separate hernial protrusion, and that it was driven into the situation described by the sudden descent of a larger portion of intestine into the cavity of the tunica vaginalis.

There was nothing in the condition of the peritoneum and bowels to forbid the recovery of the patient, as far as one could judge by the *post mortem* examination. He might perhaps have had a better chance, had he been earlier submitted to operation; but I question whether, under any circumstances, his spare and enfeebled frame would have rallied from the shock which such a proceeding necessarily entails.

## READING BRANCH.

### TRANSACTIONS OF THE READING PATHOLOGICAL SOCIETY.

By Frederick G. Harcourt, Esq.

[*Read July 13th*, 1859.]

#### Introductory Remarks.

Mr. President and Gentlemen,—The distinguished position which, through your kindness, I find myself occupying, and the prominent part which, at your request, I am about to take in this evening's proceedings, remind me but too forcibly of the truth of the Shakesperian adage, which tells us that, whilst some men are born great, others achieve greatness, and others have greatness thrust upon them. I consider this latter part of the quotation to be particularly applicable to myself, in that it has devolved upon me to have the honour of delivering the Retrospective Address on the present occasion.

Having but for a comparatively short period enjoyed the privileges and pleasure of being numbered amongst the members of your Society, I confess it was a duty I was little prepared for, and an honour I still less expected. But having been informed by our much respected Honorary Secretary, Dr. Woodhouse, that by rotation the duty of delivering this address devolved upon me—unqualified as I felt myself for this most responsible duty, and much as I wished that some other member of our Society more capable of doing justice to the occasion than myself, had been appointed, I also felt I should not only be wanting in courtesy, but wanting in gratitude, to the members of a society from whom I have derived so much pleasure and instruction, if I declined a duty which others before me had so frequently, so cheerfully, and with so much advantage to the Society, performed. I must therefore request your indulgence whilst I proceed to enumerate the pathological specimens and recite the interesting papers which have been contributed during the past year. But before proceeding to the more immediate subject of this address, I must also request your permission to congratulate you on the satisfactory—I may indeed say, the flourishing—state of our Society.

Dating its origin from the 13th of June 1841, we are consequently on the threshold of its nineteenth year. If therefore we are not the largest, at any rate I think the Society may congratulate itself upon being the most ancient of the kind in the kingdom. I think this is a fact of which Reading men ought to be proud, and more especially those connected with the Royal Berkshire Hospital, to the erection of which, doubtless, this Society owes its origin.

And if our members have not been increasing rapidly, at least they have been gradually, and I believe at this present time we number more than at any previous period of our history—fifty-five—and whilst we number more, thanks be to Almighty Providence we have no such painful duty to perform as to record the death, during the past year, of any of our members. I earnestly hope that this cheering, this happy announcement, may be the privilege of those who will doubtless succeed me in the discharge of this pleasurable, but, at the same time, responsible duty for many years to come.

Remembering, then, gentlemen, that we are met here this evening to celebrate the eighteenth anniversary of the Society, I think it would be a work of supererogation on my part to allude to the objects and purposes which this Society, and societies like this, have in view, or to dilate upon the great results and advantages which have accrued, and necessarily must accrue, to the advancement of medical and surgical science. These are facts which have so frequently been brought before you, and impressed upon you in language far more impassioned and more eloquent than any I can bring to my aid this evening—that they must be as familiar to you as "household words." At the same time I cannot refrain from telling you how cheering and how welcome are these annual *réunions*, and how we ought to cherish societies like these, whose main object after all is to bring cultivated and honourable minds into actual communion with each other, thereby giving rise to mutual respect and esteem for each other, and encouraging the reciprocation of the best feelings of our nature amongst those who are travelling the same great road of life together.

Indeed, I can truly say I always regret when circumstances will not permit me to attend your monthly meetings; for whenever I have had the opportunity of so doing I have always felt if I have not left them a better, at least I have a wiser man; and with regard to these annual *réunions*, I shall ever regard them as red letter days in the history of my professional career, and can only compare them to oases in the deserts—as bright spots to cheer us on in the toilsome and anxious discharge of our high and noble mission.

With these preliminary remarks, I will now proceed to the more immediate subject of this address, and shall follow the plan which my predecessors have generally adopted, by dividing the papers, first, into those which apply to medicine; and secondly, those which apply to surgery; and these again I shall arrange in reference to the various systems of the economy to which they belong.

#### I.—Diseases of the Nervous System.

These will occupy but a short period of our time, as I have but one morbid specimen to allude to, and no paper to relate.

*Abscess of the Brain.* Mr. Fernie, on November 17th, presented a case of abscess of the brain, occurring in a boy who was brought into the hospital and died the same night, having suffered intense headache during the hours he lived within the hospital.

There was no history with the case. He was nearly blind; partially paralysed, and had extensive disease of the lower jaw. There was a large abscess in the base of the right lobe of the brain, holding three or four ounces of greenish pus. The arachnoid at the base of the brain was thickened and opaque; the dura mater healthy. The brain surrounding the abscess was normal, and there was no connection between the necrosed jaw and the abscess.

[*To be continued.*]



British Medical Journal.

SATURDAY, SEPTEMBER 17th, 1859.

## HYSTERICAL RELIGION.

We use this term with the deepest veneration for all that truly belongs to religion. But, in its common acceptation, the word religion includes often much that does not belong to it. It is not within our province as medical journalists to enter on a strict definition of the term: there are, however, certain phenomena occasionally exhibited, which are by many regarded as religious in their character, but which, to the physician as well as to the enlightened theologian, are the mere results of disorder of mind, and often of body.

Occurrences of this kind are not new in history. The learned Hecker, in his treatise on the *Dancing Mania* of the Middle Ages, has recorded in instructive language the account of a series of epidemic phenomena, consisting in the corporeal manifestation of a diseased mental condition, which the superstition of the age dignified often with the name of religion. The special form of disease there described—an epidemic

chorea of an intense kind—has become a thing of the past; but, even in the present century, and in this enlightened country, there occur now and then epidemic phenomena, which, though in reality resulting from the co-operation of a disordered mind and a diseased body, are by the over-zealous and ignorant regarded as the results of an extraordinary influence of the sacred spirit of religion. This is a lamentable fact; but it is so, and the excessive manifestations of feeling, of which we sometimes hear as taking place in religious communities, irresistibly carry back the mind to the ravings of the Mænades and Corybantes of antiquity, and to the mad zeal of the priests of Baal, who "cried aloud, and cut themselves after their manner with knives and lancets, till the blood gushed out upon them."

To the psychologist and physician, these pseudo-religious epidemics offer a study full of interest. As they are now presented to our view, it is impossible not to see in them, in an intense degree, the workings of disease both of mind and of body. Without attempting to deny that a community of people may from time to time, and with benefit, experience an unaccustomed development of religious feeling, we must express our conviction—and it is one which must be agreed in by every sound-minded physician, clergyman, and layman—that the outrageous scenes which are related as sometimes occurring in places of public worship, of members of the congregation exercising their voices and limbs in the most unearthly manner, until, perhaps, bodily prostration incapacitates them from the performance of the duties of their daily life, are utterly inconsistent with the very principles of that religion which is professed to be taught to the people, and under the influence of which they are imagined to act.

In the narratives of these so-called conversions, certain facts now and then appear which render the cases at once clear to the physician, and point out the individuals as subjects for pity rather than for congratulation. The attentive readers of Hecker's account of the Dancing Mania can have arrived at no other conclusion, than that the phenomena described by him were various modifications of the diseased condition which, comprehensively, we call hysteria: and, though it does not appear always on the face of his narrative, there can be little doubt that in a number of instances a state of the body existed, which rendered it the too willing organ of an unenlightened mind. Speaking of a convulsive epidemic, which at one time broke out in a chapel at Redruth in Cornwall, he significantly observes: "It seized none but persons of the lowest education;" and we know, that the general hygiene of persons of this class is generally not of the best. In a recently published pamphlet* on the "religious revival" which is described as taking place in the north of Ireland, the author, who had visited the district with the laudable object of obtaining reliable information on a subject so intimately connected with his calling, says, in speaking of his visit to a meeting-house "famous for cases":—

"The preacher, before giving out his text, requested that if any cases occurred the congregation would be quiet, and leave it to the office-bearers of the church, who had made full preparation for their reception. While the preacher was urging, with the peculiar pointing of the hand before described, 'Your case is as bad as hell can make it,' a poor girl cried and fell, In reproving the excitement which followed, the preacher said 'God is doing His work in that individual.' When the sermon closed, I obtained admission to the room to which this girl had been carried, pursuant to the arrangements announced by the preacher. The room was small, and very narrow and stifling, no air, no water was there. A more pitiable sight I never saw. This girl was about 15 years of age, or perhaps a year or two older. Her frame was weak and thin; her small hands stained and ground with hard work; her skin delicate and transparent; her hair and eyelashes long and dark; her neck marked with scrofula; with a highly intellectual face, seldom seen in her class of life except in weakly girls, and now made painfully interesting by the unearthly expression of cataleptic hysteria. Every movement of the head and hands, every expression of the countenance, every moan, was markedly hysterical. She had previously been struggling and screaming. She was now quiet; her lips sometimes moving, but inaudibly. She had spoken of the devil catching souls to throw them into hell, crying, 'Away! you shan't have mine:' just the last impression made upon her failing mind. I learned that this was the third attack that this poor girl had had in a short time; each being more severe than the former, so readily does the habit grow. I could have wept to see this sad disease superadded, in the name of religion and of the Holy Ghost, to a poor weak frame, a scrofulus habit, and a life of toil."

The case here related by Archdeacon Stopford may be used as the key to a number of others which are supposed to arise from a development of religious influence. In another part of his pamphlet, he speaks positively of the hygienic condition of the subjects of these cases.

"The diet of the mill-girls often consists wholly of bread and tea.... At work for thirteen hours, they are then kept, often till long past midnight, in crowded and ill-ventilated assemblies, subjected to the greatest excitement. I have heard them singing after one o'clock in the morning."

But the reference to a work on the subject by a clergyman—a man, too, who writes evidently with highly enlightened views—leads us to consider the part taken by the ministers of religion themselves, in reference to the manifestations to which we have alluded.

In the first place, it is too obvious that the hysterical phenomena are often encouraged, under the idea that they are the outpourings of a mind filled with religious fervour. In the language—profane, we must call it—of the preacher alluded to by Archdeacon Stopford, "God is doing his work in them." Hecker, in recording from an English author the history of the religious epidemic in Cornwall, to which we have already referred, says:—

"The clergy, when, in the course of their sermons they perceived that persons were thus seized, earnestly exhorted them to confess their sins, and zealously endeavoured to convince them that they were by nature enemies to Christ; that the anger of God had therefore fallen upon them; and that if death should surprise them in the midst of their sins, the eternal torments of hell would be their portion. The over excited congregation upon this repeated their words, which naturally must have increased the fury of their convulsive attacks. When the discourse had produced its full effect, the preacher changed his subject; reminded those who were suffering of the power of the Saviour, as well as of the grace of God, and represented to them in glowing colours the joys of heaven. Upon this a remarkable reaction sooner or later took place. Those who were in convulsions felt themselves raised from the lowest depths of misery and despair to the most exalted bliss, and triumphantly shouted out that their bonds were loosed, their

* The Work and the Counterwork: or, the Religious Revival in Belfast. With an Explanation of the Physical Phenomena. By Edward A. Stopford, Archdeacon of Meath. Pp. 92. Dublin: Hodges, Smith, and Co. 1859.

sins were forgiven, and that they were translated to the wonderful freedom of the children of God. In the mean time their convulsions continued, and they remained during this condition so abstracted from every earthly thought, that they stayed two, and sometimes three, days and nights together in the chapels, agitatated all the time by spasmodic movements, and taking neither repose nor nourishment."

Archdeacon Stopford gives even a more revolting picture than this of the proceedings at Belfast. He says that "hysteria, in connection with revivalism, is now intentionally produced and propagated by man;" that "hundreds of mill-girls in Belfast have prayed, and are praying, to be 'struck';" that "there can be no doubt that in places of worship which have become famous through their hysterical cases, or in which hysteria is prayed for, the production of it is an object desired and aimed at in the preaching."

Is it not monstrous, that such a state of profound ignorance (if not of something worse) should prevail as to lead to the deliberate propagation of a diseased condition? and still more so, that the manifestation of this condition should be palmed off on the people as the direct and beneficent act of the Deity?

Turning to another part of Archdeacon Stopford's pamphlet, we find him expressing a most judicious view as to the course which ought to be taken. When a hysterical cry, he says, breaks out in a place of worship, the clergyman may at once stop it by the exercise of calm and quiet authority.

"If such a cry arise, let the clergyman stop his discourse, and say instantly, in the calm voice of one who knows that he must be obeyed, 'I will not let you cry.' The words must be thus absolute; anything of the nature of an appeal or an entreaty will probably give increased vigour to the cry."

The phenomenon is purely emotional, and is to be restrained in its commencement by the will of the preacher. Possibly, too, a kind of feeling of awe may operate beneficially; as it apparently did in the case of the Shetland minister mentioned by Hecker, who put an effectual stop to the interruptions frequently produced in his sermons by cases of cataleptiform hysteria, by threatening to have the patients immersed in a fresh-water lake adjoining his kirk.

Archdeacon Stopford fully recognises the important aid which the medical profession might afford in the treatment of this epidemic hysteria, but laments that there is a tendency to exclude this assistance rather than to employ it.

"I fear there will be few medical reports upon a subject so interesting to the medical and clerical professions. I heartily wish also that the medical instruction necessary for the clergy on this subject should be afforded to them by members of the medical profession, who alone are truly competent to give it. But I believe it to be necessary that the clergy should first be awakened to a sense of the value of such instruction, and the necessity of seeking for it. When so sought for I believe, from my own experience, that it will be cordially afforded. My task is only to lead to the desire for it; and, in the meantime, to give to my brethren that which they have especially asked me for, some light, dim as it may be, on the state of things which they have to deal with at the present moment."

We have brought forward this subject, as one of interest to the medical as well as to the clerical profession. The amount of mischief is great that is done where weakly excitable frames, worn out with bodily toil, and sparely fed, are exposed to the mental influence of designing or injudicious men. That the clergyman to whose work we have referred in this article, has taken a correct view of the duty of his profession in the case which has been described, is manifest; and it is to be trusted that his example will lead to a strict and judicious cooperation between the clergy and the members of the medical profession, in all instances where such phenomena as those which have been described as occurring in Belfast may break out.

## THE WEEK.

We are able to state, on good authority, that an important change is about to be made in the examinational system of the University of St. Andrew's. It has been the liberal principle of this University, for years past, to admit to examination all *qualified* medical men. Many men of great eminence, who might never have attained to the highest honours of medicine, have thus been admitted to them; while the profession as a body has been materially elevated. What is more, the examinational test was every year improving in the University; and a great, free, and enlightened principle was becoming fully developed. It is with deep regret that we have to state that the change in prospect to which we have alluded, is likely to destroy wholesale these immense advantages. If the newly proposed alteration be carried out by the Lords Commissioners, no person will be allowed to go up for examination at the St. Andrew's Board, unless he has had twelve months residence in the city of St. Andrew's as a student. The meaning of this change is evidently to favour the other Universities of Scotland, which already, by an absurd exclusiveness, demand residence. While we are bound to record this threatened innovation, we hope that, as an actual fact, it may be averted. Meanwhile, let the doctors of St. Andrew's be up and doing!

The warrant which was issued some time ago for regulating the rank and pay of the medical officers of Her Majesty's Indian Army has not, it appears, given such satisfaction as did the analogous documents having reference to the Army and Navy. There lies before us a pamphlet, printed at Calcutta, entitled *A Comparative Statement of the Medical Services of Her Majesty's Indian and English Armies, as affected by the New Warrants.* It is there complained, that the Indian Warrant does not place the Indian and English medical services on a par; that the rate of promotion in the Indian service is exceedingly slow, without any compensating provision; that the exceptional promotions of assistant-surgeons for distinguished service are to carry with them brevet rank only, while in the English army they carry substantive rank; and that the retiring and furlough allowances in the Indian forces are inferior to those in the British army. The writer of the pamphlet reasonably enough urges that, in consideration of his term of service being spent within the tropics, the Indian medical officer is entitled at least to an equality of privileges with those enjoyed by the medical officer of the British army. We cannot imagine but that it was the intention of the framers of the Indian Medical Warrant to do justice to those concerned; and we earnestly hope that nothing will prevent the removal of any grievances which may be felt by our brethren in the Eastern possessions of this empire, and on account of which they may have just ground of complaint.

# Association Intelligence.

## LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

A List of the Members of the British Medical Association will shortly be published in the Journal. Gentlemen whose designations or addresses, as given in the lists published on July 24th and October 9th, 1858, and June 18th, 1859, are inaccurate, will oblige by at once forwarding the necessary corrections to Dr. Williams, Worcester, or Dr. Henry, 37, Great Queen Street, London, W.C.

## BRANCH MEETINGS TO BE HELD.

| NAME OF BRANCH. | PLACE OF MEETING. | DATE. |
|---|---|---|
| East York and North Lincoln. [General Meeting.] | Beverley Arms, Beverley. | Thursday, Sept. 22nd, 2¼ P.M. |
| South Midland. [Ordinary Meeting.] | Swan Hotel, Leighton Buzzard. | Thurs., Oct. 6th, 2 P.M. |

## SOUTH-EASTERN BRANCH:

ROCHESTER, MAIDSTONE, GRAVESEND, AND DARTFORD DISTRICT MEETINGS.

The first of the third series of the Rochester, Maidstone, Gravesend, and Dartford district meetings, in connection with the South-Eastern Branch of the British Medical Association, will be held at the Crown Inn, Rochester, on Friday, September 30th, 1859, at 5.15 P.M.

The members and their friends will dine together after the meeting, at 7 P.M. precisely.

Gentlemen intending to dine, are requested to give an intimation to that effect to Dr. Martin of Rochester, or Mr. Dulvey of Brompton, on or before Monday, September 26th. Dinner tickets, five shillings, exclusive of wine.

Trains will leave for London and all stations on the North Kent Line at 9.30, and for Maidstone at 10.30.

James Dulvey, *Honorary Secretary.*

Brompton, Chatham, September 1859.

# Editor's Letter Box.

## THE MEDICAL PROFESSION IN CORNWALL.

Letter from Edward Daniell, Esq.

Sir,—By some unaccountable mischance, I omitted, when reading the Journal of August 20th, to notice a remark of Dr. Littleton to the members of the Cornwall Medical Society, charging me with casting great indignities on the profession in Cornwall. But for the kindness of a friend, this charge might never have come to my knowledge: and the pages of the Journal would have recorded, without contradiction, a statement entirely at variance with every feeling of my heart, and with the whole tenor of my address, which aimed throughout to elevate and not to depress the profession. Surely Dr. Littleton could not have read my address carefully; otherwise he would never put so unfavourable a construction on a passage which has no reference to the *legitimate* profession, however it may refer to the popular heresies of the day.

If Dr. Littleton will kindly refer to the passage which has offended him, he will find that I was speaking of a certain Cornish clergyman, whose excess of benevolence led him to quit the especial duties of his own high calling, in order to pen an extraordinary address to his parishioners, assuming an interference with their bodily infirmities as well as with their souls' sickness. I have no recollection of describing the people of Cornwall as a set of Bœotians; nor will it be so found in my address. I should belie my own heart if I did so, and do violence to the strong feeling of affection and esteem which I have for a valuable friend, a clergyman in that county, who in the early stages of my life was my friend and enlightened adviser; a man who would not be influenced by

"Doctrines fashioned to the varying hour,"

whether theological or medical.

The passage in my address which, I apprehend, wounded Dr. Littleton, would not have done so but for a small error—the substituting the definite article *the* for the indefinite article *a*. Let the passage be read, "*a* benighted region," etc., and I think Dr. Littleton will allow it is not far from the truth. The clergyman employed his churchwardens to distribute, at the church doors, on a Sunday, a homœopathic address from himself to his parishioners. Was such an act as this any part of his duty? or was it the duty of the churchwardens to distribute the address? But I need not rake up these ashes. I refer Dr. Littleton to the Journal for April 24th, 1858, and May 22nd; and then I would ask him whether there was any grievous wrong in charging the particular locality as singularly benighted. I would have charged my own town with darkness had it given me such indications.

In our beautiful Liturgy, we are taught to pray against all "False doctrine, heresy, and schism." If a clergyman meets with a person who is tainted with false doctrine, heresy, and schism, does he not deplore his darkness? Aye; but it will be said, that this refers to his soul's safety. True; but the heretic may have confidence in his false doctrines, and settle down upon them. So may the heretic in physic; but he is nevertheless a heretic, and we have as much right as the clergyman to deplore the apostasy, and say that the man is benighted, and all too who are "partakers of his plagues."

One word more: If by inadvertence I have in any way wounded Dr. Littleton or his medical brethren in Cornwall, I pray them to accept my expression of sincere regret, and assure them that I can have no just grounds for any charge against them, nor did I ever dream of making one.

I am, etc., Edward Daniell.

Newport Pagnell, September 12th, 1859.

## EVIDENCE IN CORONERS' COURTS.

Letter from William Falshaw, M.D.

Sir,—Impelled by a sense of duty to myself and to the profession, I forward the particulars of a coroner's inquest, lately held in this neighbourhood. The inquiry was conducted in a very irregular manner, and the jury returned a verdict which was not warranted by evidence, and which cannot fail to prove highly dangerous to society and mischievous to medical science.

On the night of last January 3rd, a woman, named Hannah Wood, aged 35 years, single, was taken suddenly ill after retiring to bed, and died in an hour, or from that to an hour and a quarter. The duration of her illness was not more than an hour and a quarter She retired to bed in her usual health, and soon afterwards gave an epileptic shriek. It was not an unusual thing for her to awake out of her first sleep in a state of great alarm, and with a shriek; but generally she was soon pacified. On this occasion, however, she appeared alarmingly ill, and was soon surrounded by friends and neighbours, who watched her closely and never left her till she died. The symptoms were of an anomalous character. She suffered great internal pain, and perhaps the most striking symptoms were a peculiarly anxious countenance, expressive of pain, and a rapidly sinking pulse. In consequence of the obscure nature of the case, other symptoms were especially looked for—the symptoms of poisoning. But the case was altogether irreconcilable with any known poison. There were neither retching, vomiting, purging, delirium, convulsions, nor coma. The pupils were neither contracted nor dilated, although the eye was restless. She retained her mental faculties to the last moment. (I may mention that brandy was administered to her by one of the attendants).

At the time of death she was four months advanced in pregnancy; but no one had the slightest suspicion of the fact save one individual, the father of the child; and it was in consequence of a statement made by this man three months after the woman's death that an inquiry was instituted. It appears that he had, at her request, gone to a quack doctor in the neighbourhood, and obtained some medicine for her. What it was he did not know, for she had written the name of it on a paper and he was unable to read it. Her sudden death, however, seems to have made such an impression on his mind, that after

a lapse of three months he stated his belief that she had died from poison. It turned out in evidence that the deceased had consulted several women as to the best method of procuring abortion (stating that the information was for another person). That she had taken several medicines at their suggestion, such as *hiera picra*, etc.; but these failing, she was recommended to get a certain drug from the above mentioned quack doctor, which was done some time before her death. I mention these circumstances to show that there is no proof that the woman intended destroying herself; the public, and I think the jury, were under the impression that whatever she took on the night of her death was done with the object of procuring abortion. But there was no evidence to prove that the woman took anything on that night; and, I ask, is it likely that she would *delay* taking the medicine received from the quack, and which she thought would surely produce abortion? She had already taken drugs without producing the desired effect, and the difficulty of concealing her pregnancy was daily increasing. I therefore maintain it is more likely she would swallow her medicine at once than keep it in her possession several weeks.

On April 6th the body was exhumed. The abdominal viscera, secured in the usual manner, were transmitted to Mr. Calvert, of Manchester, for analysis; and an inquiry at once opened before Mr. Sellers, deputy coroner. I have no intention to say one word in disparagement of the legal or scientific acquirements of these gentlemen (indeed, I could not if I wished); but this I do maintain, that neither of them manifested any acquaintance with the science of medical jurisprudence, and particularly the duties of a medical jurist, and the rules which ought to have guided him in making a report of his analysis for a coroner's jury.

Notwithstanding the fact that I was the *only* medical man that saw the deceased during her brief illness, and moreover the *nearest* to her, I neither received the coroner's order to make a *post mortem* examination of the body, nor to attend his court to give evidence. I did attend at the fag-end of the proceedings, at the request of Mr. Calvert. Mr. Calvert seems to have complained a good deal of the want of medical evidence; he said that, had he been informed of the manner of her illness, or death, he might have been able to say what the exact poison was that caused her death. And the reiteration of the remark "want of medical evidence," etc., was not very pleasant, as it gave the public outside the impression that I had been guilty of some culpable neglect. If one of the most important witnesses that could have appeared before the jury was not forthcoming, if there was complete absence of medical evidence, and if the analytical chemist was crippled in his researches in consequence of that absence, where was the fault? Surely it was in consequence of unjustifiable neglect of duty on the part of the coroner. And I must state that when I was called, at the request of Mr. Calvert, it was at a time when he could and ought not to have been influenced by any evidence I could give; and I may remark that it is quite unreasonable, even for a man of Mr. Calvert's penetration, to expect that I, or any other medical man, should be able to describe symptoms which never existed.

The verdict of the jury was founded on the evidence of Mr. Calvert. He is reported to have said that he commenced to test the stomach and its contents for corrosive mineral poison, and he enumerated the most important metallic irritant poisons, but failed in finding any. He then devoted the remaining portion of the stomach, etc., to a search for a vegetable alkaloid; and I must confess that the various chemical manipulations required to find out this alkaloid were given with a detailed minuteness which must have been highly interesting to a country jury, but which was quite unnecessary; for a reporter is not called upon to display his erudition, but to make himself understood. However, after considerable labour, he at last finds what he conceives to be an alkaloid, but the quantity is so small that he is unable to say what it is—nay, he does not even demonstrate it to be a poison, and, for anything known to the contrary, it may have been quite innocuous.

Now, the evidence altogether tended otherwise than to confirm the report that the woman had died from poison; and, although Mr. Calvert did not detect poison, he is reported to have made the following extraordinary statement:—"He was, however, of opinion that the deceased came to her death by taking some violent alkaloid poison, an exceedingly small portion of which would be sufficient to cause death. The violent irritation which he observed at the entrance of the stomach confirmed him in the opinion that death must have resulted from a violent alkaloid poison. He was certain that the alkaloid was not strychnia, but was disposed to consider it belladonna."

May I ask if any medical witness, having a knowledge of the physiological actions of remedies on the one hand, and an acquaintance with *post mortem* appearances on the other, would, on oath, have adventured such a statement? And may I further ask, does belladonna, or its alkaloid, atropia, usually prove fatal in an hour and a quarter? Can a case be given where they proved fatal without producing great and characteristic disturbance of the functions of the brain? Is it likely that a poison can produce violent inflammation of the stomach without inducing retching and vomiting? and is it not possible that brandy, administered before death, might produce an inflammatory appearance of the stomach? The impression, however, prevails that the woman was poisoned by belladonna.

The jury, after a short deliberation, returned the following verdict:—"That the deceased came to her death by some virulent vegetable alkaloid; but whether administered by herself or others there is no evidence to show." This verdict, I maintain, is entirely fallacious and indefensible, for the following reasons:—

1. Because there is no evidence to show that the deceased ever obtained a deadly poison.
2. Because there were no symptoms of poisoning during life.
3. Because there was no evidence to prove that poison was detected after death.
4. Because there was no medical evidence in support of the verdict.
5. Because the manner and duration of the illness were quite irreconcileable with the only poison that was mentioned, viz., belladonna.
6. Because during the inquiry there was no attempt made to ascertain "if there was any other cause of death."

To say the least, there was a doubt, a reasonable, substantial doubt; and therefore the jury ought (to borrow an expression from you) to have acted in accordance with the universally recognised principles of English justice. It was one of those sudden and mysterious deaths which every now and then occur, and which is beyond the power of man to solve, and ought, therefore to be left to that inevitable and unerring judgment which no cunning can evade, and no ingenuity avert.

I am, etc., William Falshaw.

Ramsbottom, September 8th, 1859.

# Medical News.

## BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

* *In these lists, an asterisk is prefixed to the names of Members of the Association.*

### BIRTHS.

*Of sons, the wives of—*

Copland, James C., Esq., Surgeon, Brightlingsea, on Sept. 3.
*Cox, Arthur, Esq., Long Buckby, on September 6. (Twins.)
*Granville, J. Mortimer, M.D., Bristol, on September 7.
Hensley, F. J., M.D., Spring Gardens, on September 8.
Squire, S. N., Esq., Surgeon, Wivenhoe, on Sept. 7.

*Of daughters, the wives of—*

*Ashley, W. H., M.D., Ladbroke Square, on Sept. 11.
Prance, R. R., M.D., Hampstead, on Sept. 6.

### MARRIAGES.

*Cornwall, John, Esq., of Ashcott, Somerset, to Sarah E., eldest daughter of the late J. P. Hodgson, Esq., of Battersea, on Sept. 8.

Harper, A., Esq., Controller of the Customs Fund, to Lydia, younger daughter of J. M. Camplin, M.D., of Islington, at Highbury, on Sept. 6.

Mackenzie, John I., Esq., Surgeon, to Emily E., only child of the late Captain Rebenack, H.E.I.C.S., on Sept. 13.

Plowman, Wm. T., M.D., to Catherine A., second daughter of H. Hardstaff, Esq., of Hactre Court, Somerset, on September 5.

Scoresby-Jackson, R. E., M.D., of Edinburgh, to Elizabeth White, only child of Sir Wm. Johnston, of Kirkhill, on September 14.

Tanner, T. H., M.D., to Mary W., only daughter of J. Roberts, Esq., of Bayswater, on Sept. 10.

## DEATHS.

Hughes, Joseph H., Esq., Surgeon R.N., at Islington, aged 87, on Sept. 3.

Irwin. On September 4th, at Killiney, Ireland, Charlotte, second daughter of the late H. Irwin, M.D., Deputy Inspector-General of Military Hospitals.

## APPOINTMENTS.

Brown, Henry, Esq., and Ellison, James, Esq., appointed, jointly, Surgeon and Apothecary in Ordinary to Her Majesty's Household at Windsor.

## PASS LISTS.

Apothecaries' Hall. Licentiates admitted on *Thursday, September 8th*, 1859:—

Howse, Wm., Burford
Lever, Reginald C., Army
Moore, Thomas, Hales Owen
Park, John S., Ballarat
White, Fras. T., Rawreth, Essex

The following gentleman, on the same day, passed his first examination:—

Colbeck, Thomas Wm., Kensington

## HEALTH OF LONDON—SEPTEMBER 10th, 1859.

[*From the Registrar-General's Report.*]

| | | Births. | Deaths. |
|---|---|---|---|
| During week ..... | Boys .. 875 / Girls .. 826 | 1701 | 1111 |
| Average of corresponding weeks 1849-58 .. | | 1531 | 1102 |

Scarlatina and diphtheria became more fatal, but the deaths by fever and diarrhœa decreased; so that the deaths by zymotic diseases amounted to 386, the same number as last week. Of diarrhœa, 148; of cholera, two persons died. A retired plant-broker, aged 69, died of cholera, said to be Asiatic, at 24, Princes Street, Mile End Old Town. A merchant's wife, of the age of 36, died of cholera on board of the *Moselle*, shortly after it had passed Gravesend. The attack was fatal in twelve hours. She had suffered from choleraic diarrhœa at Rostock, and left that place in rather a weak state; went on board the steamer at Hamburgh on Friday night at 12 o'clock; was attacked by cholera on Sunday morning at about 11 o'clock, and died soon after 11 o'clock at night.

*Barometer:*
Highest (Sat.) 30.009; lowest (Tues.) 29.648; mean 29.841 in.

*Thermometer:*
In sun—highest (Mon.) 91°; lowest (Sun. & Tues.) 68°.
In shade—highest (Th.) 72°; lowest (Sun. & Mon.) 46.5°.
Mean—58°; difference from mean of 43 yrs. +0.1°.
Range—during week, 25.5°; mean daily, 19.0°.

Mean humidity of air (*saturation*=100), 73.
Mean direction of wind, S.W.—Rain in inches, 0.35.

## LONDON MEDICAL REGISTRATION ASSOCIATION.

At the last meeting of the General Committee, held at the office of the Association, No. 5, Charing Cross, on Wednesday evening, September 7th, Mr. F. Dover in the Chair, a large amount of important correspondence was read and considered. The accessions of members were numerous, and several county and other Medical Registration Associations in different parts of England had sent subscriptions, and joined the central body, the advice and assistance of which they now asked, for the purpose of putting down quacks in their several localities. In a letter written to Dr. Ladd, by the Secretary of one of the county Associations, appeared the following passage:—

"A resolution requests me to inquire of you whether (in the event of evidence and funds being supplied by the local Association) the London Association will undertake our prosecutions, so as to do away with the inconveniences of local practitioners becoming the prosecutors. It was thought that if the cases in our district were submitted to the London Association for opinion as to the advisability of prosecuting, the requisite funds and evidence could be obtained here if it were thought that the cases were legally suitable for prosecution. The difficulties connected with the interpretation of the Medical Act, and the confessedly imperfect state of the printed Register, make us slow in commencing any prosecution, except under good legal advice. It was determined that I should lay before you the particulars of two cases, asking your advice concerning them."

These instances—viz. of a herbalist and a fully-blown homœopathic practitioner—were then briefly detailed. Dr. Ladd was authorised to write in reply, asking to be furnished with full particulars of the cases in question, and of the amount of evidence attainable.

The secretary of a similar body writes:—"Every medical man hereabouts fully appreciates the services of the London Association"; which, he says, will probably be joined individually by the members of the body he represented, their Association being but a small one.

The secretary of a third—the South Cheshire Association—says:—"I am instructed to express a cordial assent to the project of the co-operation of the central and local Registration Associations, and to forward a subscription," etc.

From the secretary of a fourth—the Bristol Medical Registration Association—was sent a copy of the following printed resolution, dated August 4th:—"At a meeting of the members of the medical profession, held this day, it has been determined to form a Medical Registration Association in this city, in connexion with and a branch of the Parent Association in London." A subsequent letter, dated August 20th, states that, "at a meeting of the Bristol Medical Registration Association, it was resolved at once to affiliate it to the London Association."

Other communications requested that legal gentlemen should be dispatched from London by the Association to watch important cases in which unqualified practitioners had become involved; and, in fact, would fain place an amount of work in the hands of the Committee and Secretaries of the London Association, for the whole of which, unfortunately, they have not at present funds at command.

A letter was read from Dr. Francis Hawkins, addressed to Dr. Ladd, and intimating that foreign degrees, obtained after the 1st of October, 1858, whether by examination or not, would not be officially registered. An extract from this letter to such an effect appeared in the *Lancet* of last week, as did the correspondence of Mr. Rymer with the honorary secretary relative to the assumption by dentists of the title of "surgeon"-dentists. In his first letter, Mr. Rymer was disposed to provoke a prosecution nominally against himself, for the purpose of trying, in a court of law, the right of dentists to the above designation: but in his second letter, read at this meeting, he stated that the College of Dentists would prefer that the matter should be settled by arbitration; a difficult undertaking, however, since no arbitration could be made binding, or in any way effective unless voluntarily submitted to.

Letters were read from several persons to whom "warnings" had been sent by the honorary secretary, notifying that they had renounced the title of "surgeon," to which they were not legally entitled; and some members of the committee instanced other cases, within their personal knowledge, of individuals who had received "warning letters," having similarly abandoned improperly assumed designations.

Amongst the resolutions passed, was one requesting the honorary secretary, Dr. Ladd, to draw up, in the name of the Association, a memorial to the council of the College of Surgeons, in reference to the projected examinations of dentists at this college, and expressive of a hope that the interests of members of the college will be so far considered that the diploma to be granted to dentists will not entitle them to use the title of "surgeon," nor to appear on the medical Register.

The funds of the London Medical Registration Association are now, according to the weekly financial reports, not only steadily, but rapidly augmenting; but the expenses of prosecutions, etc., have been heavy, and, aware of how much has to be done in the cause of the profession, the cry is still, at the committee-room, "*Plus d'argent.*"

At the meeting on Wednesday last, the 14th instant, Mr. Jones, of Mount Street, the prosecutor of Watters and Edwards, at the Lambeth Police Court, attended by appointment, together with Mr. Smith, of Pall Mall, who has been active in endeavouring to obtain for Mr. Jones some recompense from the profession for the heavy expenses and loss which that prosecution entailed upon him. The committee of the Association readily agreed to head with a subscription of five guineas the list of those who desire to reimburse Mr. Jones, and they trust that the example will be followed by all the haters of quackery.

## TO CORRESPONDENTS.

### POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

Any amount of manuscript or printed matter, singly or together, provided it contains nothing in the form of a written letter, is transmitted through the post, in packets *open at the ends*, at the following rates: not exceeding 4 ounces, one penny; above 4 and not exceeding 8 ounces, twopence; above 8 ounces and not exceeding 1 pound, fourpence; for every additional half-pound or under, twopence.

ANONYMOUS CORRESPONDENTS should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

NOTICE.—DR. WYNTER will feel obliged if the Associates will address all Post Office Orders in payment of Subscriptions, to the Publisher, MR. THOMAS JOHN HONEYMAN, 37, Great Queen Street, Lincoln's Inn Fields, London, W.C., "Bloomsbury Branch"; and he would also feel obliged by their sending all communications respecting the non-receipt of the Journal, to the same address; as both these matters are out of the province of the Editor.

*Communications have been received from:*—MR. J. A. LOCKING; MR. H. TERRY, JUN.; DR. FALSHAW; DR. W. CAMPS; MR. I. HARRINSON; DR. PROBART; DR. H. SALTER; DR. MARTYN; DR. JOHN W. GOODWIN; MR. E. GARRAWAY; MR. C. J. EVANS; DR. JAMES RUSSELL; MR. T. HOLMES; DR. J. B. NEVINS; MR. FRED. G. HARCOURT; DR. LIONEL BEALE, DR. HERBERT BARKER; DR. W. F. WADE; MR. DULVEY; and MR. W. MARTIN.

### BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. An Account of the Life, Lectures, and Writings of William Cullen, M.D. Professor of the Practice of Physic in the University of Edinburgh. By John Thomson, M.D. In Two Volumes. Edinburgh: Blackwood and Son. 1859.

## ADVERTISEMENTS.


# Liverpool Royal Infirmary School OF MEDICINE.

SESSION OF 1859-60.

The INTRODUCTORY ADDRESS will be delivered by Dr. COLLINGWOOD, on October 1st, at Two p.m.

LECTURES—WINTER SESSION.

Principles and Practice of Surgery .....Mr. Long.
Principles and Practice of Medicine.....Dr. Inman.
Anatomy and Physiology ..... } Mr. Fletcher and
Pathology, Descriptive & Surgical Anatomy } Mr. Waters.
Chemistry and Pharmacy.....Dr. Edwards.

The Dissecting Room is Open Daily, from Eight a.m. to Six p.m.

SUMMER SESSION.

Midwifery and Diseases of Women .....Mr. Batty.
Diseases of Children.....Mr. Grimsdale.
Materia Medica and Therapeutics .....Dr. Nevins.
Medical Jurisprudence .....Dr. Cameron.
Toxicology .....Dr. Edwards.
Botany .....Dr. Collingwood.
Ophthalmic Medicine and Surgery .....Dr. H. Taylor.
Practical Chemistry .....Dr. Edwards.
Pathological Anatomy .....Dr. Broadbent.

In addition to the Prizes in each Class, the following EXHIBITIONS are offered for competition annually:

ROYAL INFIRMARY MEDICAL SCHOLARSHIP, value £42, consisting of a Gold Medal and Six Months Free Board and Residence, with Dressership and Clerkship, in the Royal Infirmary. Should the Scholarship be gained by a Resident Pupil of the Infirmary, Six Months Payment (£31 : 10) will be returned to him.

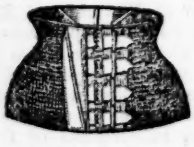
FOUR EXHIBITIONS, value £31 : 10 each, consisting of free Board and Residence in the Royal Infirmary for Six Months, with Dressership on award of the Medical Board

For further particulars apply to Mr. FLETCHER, 13, Mornington Terrace, Liverpool.

*J. & E. BRADSHAW, late*

# Shoolbred and Bradshaw,

34, JERMYN STREET, begs to call attention to the various improvements in PATENT ELASTIC STOCKINGS, BELTS, KNEE-CAPS, SOCKS, and Ladies' and Gentlemen's SPINE SUPPORTERS. A new description of BELT, invaluable for prevention of Cholera, and the cure of Rheumatism, Lumbago, etc. N.B. Every description of INDIA-RUBBER BANDAGE, vulcanized on the newest principle.



Directions for measurement sent by post.—N.B. A liberal Discount to the Profession.

A female to attend on Ladies.

# Grosvenor Place School of Medicine.

No. 1, GROSVENOR PLACE (adjoining St. GEORGE'S HOSPITAL).

WINTER SESSION 1859-60.

LECTURES.

The Introductory Lecture will be delivered on Monday, October 3rd, at Three o'Clock, p.m., by Dr. COCKLE.

General Anatomy and Physiology—Dr. Richardson.
Descriptive and Surgical Anatomy—Dr. Halford and Mr. Lawson.
Practical Anatomy—Mr. Pittard.
Chemistry—Dr. Thudichum.
Principles and Practice of Medicine—Dr. Cockle and Dr. Leared.
Principles and Practice of Surgery—Mr. Spencer Wells & Mr. Adams.

FEES. General Fee to all the Lectures required by the Universities of London and St. Andrew's, the Royal College of Surgeons of England, and the Society of Apothecaries, $5 Guineas.

Special Arrangements may be made for any one of the Examining Boards.

Prizes and Honorary Certificates will be awarded for general proficiency at the termination of the Session.

The Microscope is used to illustrate the Lectures and Demonstrations.

The Dissecting Room and Museum of Anatomy are open to the Students during daylight, where their Studies are superintended by the Lecturers on Anatomy and Mr. PITTARD.

The Lecturer on Chemistry has a Private Laboratory, where Students are instructed in Analytical and Physiological Chemistry.

Instruction in Pathological Anatomy is given by the Lecturer on Physiology.

Further information may be obtained at the School, 1, Grosvenor Place; of Dr. RICHARDSON, 12, Hinde Street, Manchester Square, W.; or at the Residences of the different Lecturers.

# Bristol Medical School.--The Winter

SESSION 1859-60 will commence on Monday, October 3rd. The following Courses of Lectures will be delivered:—

Medicine—Dr. Brittan.
Surgery—Mr. Clark and Mr. Prichard.
Descriptive and Surgical Anatomy—Mr. Coe and Mr. Leonard.
General Anatomy and Physiology—Dr. Martyn and Dr. Fripp.
Chemistry—Mr. Herapath.
Superintendence of Dissections—Mr. C. Leonard, Mr. T. E. Clark, and Mr. H. Ormerod.

At the conclusion of the Session, Prizes will be awarded in accordance with the regulations of the School.

Certificates of attendance upon the Lectures delivered at this School qualify for Examinations at the Royal College of Surgeons, the Apothecaries' Hall, the University of London, the Army, Navy, and India Boards.

Fee for unlimited attendance upon all the Courses of Lectures (except Practical Chemistry), 45 Guineas.

Students from a distance can be provided with board and lodging under the recommendation of the Faculty of the School.

Information upon all particulars may be obtained upon application to the Honorary Secretary.

HENRY EDWARD FRIPP, M.D., Hon. Sec.

Medical School, Old Park, Bristol, Sept. 7, 1859.

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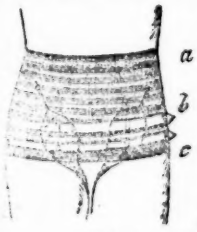


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